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PSYCHOLOGICAL ABSTRACTS

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GENERAL

383. **Beebe-Center, J. G. Leonard Thompson Troland: 1889–1932.** *Amer. J. Psychol.*, 1932, 44, 817–820.—An appreciation of Troland, together with a critical summary of his theoretical approach to psychological problems of all types, i.e., the "method of mathematical hypothesis."—*D. E. Johannsen* (Skidmore).

384. **Buel, J. Some improvements in "A Self-Recording Maze With An Automatic Delivery Table."** *J. Gen. Psychol.*, 1932, 6, 483–489.—Some improvements are described in the apparatus previously described in *Univ. Calif. Publ. Psychol.*, 1929, 4, 99–112.—*H. Cason* (Wisconsin).

385. **Buel, J. A continuously variable speed polygraph with a telechronic time marker.** *J. Gen. Psychol.*, 1932, 6, 489–492.—The polygraph described has the following advantages: simplicity and reliability, a continuous and wide range of paper speeds, a built-in self-inking time and stimulus marker of great accuracy and reliability, a high degree of flexibility and utility for a variety of laboratory uses, and a low first cost and economical operation.—*H. Cason* (Wisconsin).

386. **Crane, G. W. Psychology applied.** Chicago: Northwestern Univ. Press, 1932. Pp. 586.—The major emphasis of this text is the development and skilful application of one's own personality. It is essentially practical. Chapters deal with: methods of motivating human beings; the psychology of learning and memory; increasing human efficiency; individual and sex differences; the effect of suggestion on behavior; the psychology of improving your personality; the psychology of selling your product; the fields and functions of advertising; personnel administration; the psychology of music and morale; the psychology of the public platform; the psychology of writing and of art; child psychology; psychology applied in education; psychiatry and mental hygiene; psychology applied in the professions. Each chapter has its own list of references. The chapter on personality is subdivided as follows: The importance of personality development; the universality of self-salesmanship; tactful vs. blunt selling points; the two essential steps in becoming popular; dangers to avoid in self-salesmanship; why the novice fails in selling himself; the tactful winning of young people, of middle-aged people, of elderly people; developing your social intelligence. The chapter on music and morale is subdivided as follows: the place of music in building morale; jazz vs. classical music; music and emotional conditioning; the educational potentialities of music; the rôle of music in propaganda; propaganda vs. advertising; how to develop propaganda; how to combat propaganda; utilizing advertising in the interests of morale; the relationship of morale to success.—*O. L. Harvey* (Boston).

387. **Dallenbach, K. M. The New York meeting of the Society of Experimental Psychologists.** *Amer. J. Psychol.*, 1932, 44, 582.—*R. R. Willoughby* (Clark).

388. **Darrow, C. W. The Behavior Research photopolygraph.** *J. Gen. Psychol.*, 1932, 7, 215–219.—The Behavior Research photopolygraph is a compact, portable system which gives photographic records of the galvanic skin reflex, blood pressure, respiration, time, and signal marks on six-centimeter bromide paper by the shadow-graphic method commonly employed in work with the string galvanometer.—*H. Cason* (Wisconsin).

389. **Darrow, C. W. Uniform current for continuous, standard unit resistance records.** *J. Gen. Psychol.*, 1932, 6, 471–473.—This modification of the Behavior Research resistance box satisfies the following requirements for comparison of different subjects: high sensitivity; small current through the subject, thus avoiding irritation; practically uniform current through all subjects regardless of the subject's resistance; continuous quantitative records; records in standard units; automatic balancing of the bridge; stable balancing of the bridge with the subject out of the circuit; uniform scale values, when desired, for subjects having different resistance levels.—*H. Cason* (Wisconsin).

390. **Darrow, C. W. Relatively non-polarizing, constant moisture, constant pressure, constant area electrodes.** *J. Gen. Psychol.*, 1932, 6, 473–476.—*H. Cason* (Wisconsin).

391. **Darrow, C. W. A standardization for amplified records of the galvanic skin reflex.** *J. Gen. Psychol.*, 1932, 6, 476–478.—The Behavior Research resistance box, which can be employed to secure continuous quantitative records, can be used in the input of an amplifier; but a simpler method is here described for use with vacuum-tube amplification.—*H. Cason* (Wisconsin).

392. **DeSilva, H. R., & Weber, A. Relativism and the school-individualist controversy.** *J. Gen. Psychol.*, 1932, 6, 447–456.—"The school-scientist is looking for consistency and stability, while the individualist is looking for a constantly changing scientific system which will accommodate the ever-increasing body of scientific fact. . . . The individualistic psychologist may be a behaviorist in one experiment, a structuralist in another, and a configurationist in a third. Explanatory principles are for the individualist not mutually exclusive. He may aim for consistency in his thinking about the particular investi-

gation that he is at present working on. Whether he fits into a certain school is determined principally by the stage of his research. Basically, he regards his facts as more nearly absolute and permanent and his theories as more relative and temporary."—*H. Cason* (Wisconsin).

393. **Dimmick, F. L. An accurate differential color-mixer.** *Amer. J. Psychol.*, 1932, **44**, 798–799.—Description of a color-mixer, carrying 2 discs, which permits adjustments of as little as 0.5° at a time during rotation, and with an accuracy as great as that obtainable with a protractor.—*D. E. Johannsen* (Skidmore).

394. **Dimmick, F. L., & Adams, A. L. A simplification of the Ruckmick-Patterson non-polarizable electrode.** *Amer. J. Psychol.*, 1932, **44**, 800.—A modification of the non-polarizable electrode suggested by Ruckmick and Patterson, which consists in substituting a thistle-tube of the standard variety for the blown glass suggested by the earlier workers.—*D. E. Johannsen* (Skidmore).

395. **Dorcus, R. M. A new control key.** *J. Gen. Psychol.*, 1932, **6**, 492–493.—*H. Cason* (Wisconsin).

396. **Esper, E. A. Electrical resetting devices for the Dunlap chronoscope.** *J. Gen. Psychol.*, 1932, **6**, 478–480.—Devices are described whereby the hands of the chronoscope may be reset to zero electrically by pressure on a key.—*H. Cason* (Wisconsin).

397. **Feldman, S. Wundt's psychology.** *Amer. J. Psychol.*, 1932, **44**, 615–629.—A chapter-by-chapter summary of Wundt's theoretical stand on various psychological topics in the *Grundzüge der physiologischen Psychologie* (1874). The topics considered include sensation, sensory intensity, sensory quality, sense-feelings, apprehension, perception (tactual, auditory, and visual), imaginative apprehension, complex apprehension, esthetic feelings, consciousness and attention, course of apprehension (association), emotion, action, and expressive movements. In the concluding remarks Wundt states that "all psychological processes are physiologically grounded; and just as the organism is a unity of many parts, so mind, its inner counterpart, is a unitary connection of multiple processes. These principles suggest the monistic conception that the world consists of simple entities variously integrated, and undergoing parallel changes externally and internally."—*D. E. Johannsen* (Skidmore).

398. **Fenyves, E. [Ed.] Mitteilungen für individualpsychologische Veranstaltungen.** (Communications for individual-psychology groups.) Vienna: Danica Deutsch, 1932. Volume 1.—*R. R. Willoughby* (Clark).

399. **Frank, C. Il processo fine della coscienza.** (The delicate process of consciousness.) Rome: "La Precisa," 1931. Pp. 385.—The author states that his manner of thinking "psychologically-anatomically" originated from Kraepelin's school and later from that of Mingazzini. He speaks of the science of "biopsychology," which he divides into: normal biopsychology; experimental and hereditary biopsychology; biopsychopathology; biopsychotherapy and biopsychagogy. The author considers it certain that the psychic functions reside in the cerebral cortex, to which alone is assigned the rôle of carrying out the determining and dominant psychic functions and elaborations. For this reason he feels authorized to catalogue biopsychology among the exact sciences, and feels that it has nothing in common with pure psychology or with experimental biopsychology. Basing his concept on the work of Brodmann, Vogt, and especially Economo and Koskinas, he reviews the different layers of the cerebral cortex and their connection with the higher psychic functions. He assigns the seat of conscious processes to the frontal lobes; the "supereonscious" phases he places more precisely in the left cortical area, and the subconscious on both sides. According to the author, the biopsychological conceptions furnish a precise explanation of the waking state, of sleep, dream and hypnosis. The paleo-encephalon is a secondary center for the common emotional mechanisms, while the cortex, which presents individual variations, determines the course of normal and pathologic activity. In this way all psychic facts find their explanation not in somatogenesis but in "corticogenesis." As regards pathology, there exist partial "corticoses" such as hysteria and neurasthenia, total "corticoses" like paranoia and manic-depressive psychoses, partial "corticites" like genuine epilepsy and severe intoxications, total "corticites" like phrenasthenia and dementias. The treatment of these corticoses and corticites is effected by the cortical procedure, that is, by the method of persuasive suggestion, which is based on the following psychological law: "The psychic causes cannot be eliminated except by psychic means; therefore a corticosis must be treated by cortical means." The author gives the details of his technique and cites various cases of mental diseases where his method has had good results. Corticagogy or "the psychic integral method of education" should be used in teaching the child. Mental hygiene and sexual educational information would assist in preventing mental diseases. The author severely criticizes the conceptions of Bleuler, Kretschmer, and Pende; Freud is for him a true metaphysician.—*H. Sys* (New York City).

400. **Gulliksen, H. A new form of tachistoscope.** *J. Gen. Psychol.*, 1932, **6**, 223–226.—A tachistoscope is described which satisfies the following requirements: it presents a series of visual stimuli to the subject; the time between stimulations is constant for any series, but it can be easily altered for different series; the duration of each stimulation is constant for any series, but it can be easily altered for different series; the time between stimulations, and the duration of each stimulation, are independently variable; it is easy to vary the order in which the stimuli are presented; and after exposure to the subject, the series is in the same order again, ready for presentation to another subject.—*H. Cason* (Wisconsin).

401. **Heinlein, C. P., & Morgan, L. E. A method of measuring difference color limen by means of the photo-electric cell with thermionic amplification.** *J. Gen. Psychol.*, 1932, 7, 219–230.—A means is provided for presenting two visual stimuli of the desired wave-length, and for keeping one constant while the other is varied by smaller degrees than can be detected by the human eye. The apparatus will also measure in arbitrary units of sufficient size the intensities of the two stimuli. The intensities obtained may be reduced to standard or universal units by correcting them in accordance with the color sensitivity curve of the photo-electric cell and the transmission characteristics of the filters used, as determined by spectrophotometric methods. The apparatus has greater sensitivity than the human eye, and its response is stable from day to day. A means is provided for frequent recalibration. Experimental conditions may be reproduced within the limits inherent in the parts of the apparatus themselves.—*H. Cason* (Wisconsin).

402. **Hippius, R. Wilhelm Betz.** *Arch. f. d. ges. Psychol.*, 1932, 84, 513–520.—Wilhelm Betz died August, 1930. His two principal psychological books were *Psychologie des Denkens* (1918), and *Zur Psychologie der Tiere und Menschen* (1926). This article, after evaluating his psychological contributions and his own temperament and spirit, concludes with a bibliography of his publications.—*M. F. Martin* (West Springfield, Mass.).

403. **Honegger, R. Das Lebenswerk von G. F. Lipps.** (The life work of G. F. Lipps.) *Arch. f. d. ges. Psychol.*, 1932, 84, 305–329.—G. F. Lipps, ordinarius for systematic psychology, general pedagogy, and experimental psychology at the University of Zürich, died on March 9, 1932. This article summarizes his problems, methods, achievements, and intellectual relations with other psychologists.—*M. F. Martin* (West Springfield, Mass.).

404. **Horst, P. Psychology and the scientific method.** *J. Phil.*, 1931, 28, 337–347.—The purpose of science is ultimately the control of events. Since this depends on knowledge of sequential relationships, the first task of the investigator is to isolate the variables, these being in general such as affect a given sense modality. But variables form complexes, and the important thing is to isolate and bound a system. Psychology differs from physics in these regards, not in kind, but in degree of complexity. Mathematical treatment requires functions that are continuous, and this demands stable units of measurement. The simplest type of relationship is the straight-line one of correlation. A thorough methodology would explore all types of appropriate relationships. Fixing the degree of accuracy is essential to any scientific law. Experimental technique is an aid to scientific method but not an essential. Control of the variables is desirable where possible, but it is the record which is essential.—*E. T. Mitchell* (Texas).

405. **Kling, C. On the instrumental analysis of thought.** *J. Phil.*, 1932, 29, 259–265.—Dewey explains that his analysis of the complete act of thought describes logical distinctions rather than actual psychological movements. The only exception which he makes is that between stage 3, "the rise of suggestions," which is the inductive movement from facts to interpretations, and stage 4, "the elaboration of suggestions," which is the deductive movement from meanings to their implications. But an instrumentalism such as Dewey's should demand an analysis showing how solutions actually take place through the instrumentality of ideas. A more fundamental distinction than that between stages 3 and 4, and one which has a sound biological foundation, being exhibited in rudimentary form even at low animal levels, is that between preparatory movements and overt conduct. In the "complete act of thought" the preparatory movements include the rise and elaboration of suggestions (Dewey's stages 3 and 4) while the consummatory movement includes the execution of the idea or its experimental test. This represents both a logical distinction and an actual division of labor.—*E. T. Mitchell* (Texas).

406. **Koch, M. A modification of the Dallenbach heat grill.** *Amer. J. Psychol.*, 1932, 44, 800.—Description of a heat grill, similar to the older form, but of larger bore, so that the volume of water passing through the tubes is greater; the limits of the temperatures which may be used is thereby increased.—*D. E. Johannsen* (Skidmore).

407. **Lindley, S. B. A rotary electric switch.** *J. Gen. Psychol.*, 1932, 6, 221–222.—Description of a quick-acting electric switch which responds to changes in the direction of motion.—*H. Cason* (Wisconsin).

408. **Loukas, C. The psychology of Aristotle: a logical arrangement of his *De Anima* and allied treatises (in synoptic form).** *J. Gen. Psychol.*, 1932, 6, 157–189.—An attempt to bring together in summary form the main theses of Aristotle's psychological argument. There are treatments of: emotions; memory; recollection; the laws of contiguity, similarity, and contrast; catharsis; pleasure; sleep; and dreams.—*H. Cason* (Wisconsin).

409. **Max, L. W. Amplifiers for class-room demonstration of action currents.** *J. Comp. Psychol.*, 1932, 14, 165–170.—Several devices are described, some simple and others more complex and requiring a greater knowledge of radio construction.—*N. L. Munn* (Pittsburgh).

410. **Navez, A. E., & Robinson, T. W. Automatic recording of movements of plant organs.** *J. Gen. Physiol.*, 1932, 16, 125–131.—An automatic photographic recording device is described.—*C. H. Graham* (Clark).

411. **Pratt, C. C. Anton Abram Grünbaum: 1885–1932.** *Amer. J. Psychol.*, 1932, 44, 816–817.—Brief summary of the work of Grünbaum, who was director of the psychological laboratory at Amsterdam.—*D. E. Johannsen* (Skidmore).

412. **Radulescu-Motru, C. Psihologia practica.** (Practical psychology.) *Rev. de psihol.*, 1931, 1, 1–7.—Though practical psychology has a great im-

portance for everyday life, we have as yet no such discipline. Only when we can reconcile the abstract with the concrete (that is to say to proceed as in all other sciences) shall we understand the psychological concrete, and thus establish a scientific practical psychology; this will happen sooner than we think. The past century was the century of the conquest of steam and electricity for their application to industry; the next century will be that of the conquest of psychic energy for the moral renovation of mankind. —*M. Moldovan* (Bucarest).

413. **Renshaw, S. A. P. Weiss.** *J. Gen. Psychol.*, 1932, 6, 3–7.—Personal details of the life and work of Weiss.—*H. Cason* (Wisconsin).

414. **Robinson, E. S. Man as psychology sees him.** New York: Macmillan, 1932. Pp. vii + 376. $2.50. —The volume is divided into two parts, the first on *Man, Comments on his Nature*, the second on *Psychology, its Aims, its Deeds, its Follies*. The topics of the first part include motivation (from the depth-psychology viewpoint), heredity versus environment, learning, thinking, and the psychophysical connection. The second part considers definitions and systems of psychology, famous conflicts, and present crisis.—*R. R. Willoughby* (Clark).

415. **Ruckmick, C. A. The seventh annual meeting of the Midwestern Psychological Association.** *Amer. J. Psychol.*, 1932, 44, 810–816.—Resumé of the papers read at the meetings of the Midwestern Psychological Association held at the University of Indiana (Bloomington, Indiana) on May 13 and 14, 1932.—*D. E. Johannsen* (Skidmore).

416. **Scott, T. C., & Nelson, B. B. Factors affecting the reliability of the maze: a comparison of the high-relief finger maze and an improved form of the stylus maze.** *J. Gen. Psychol.*, 1932, 6, 70–89. —Using an improved 10-alley stylus maze with human subjects, an odd-even correlation of .921 and reliable sex differences were obtained.—*H. Cason* (Wisconsin).

417. **Slater, L. B. A self-recording human maze.** *Amer. J. Psychol.*, 1932, 44, 799.—Description of a maze which records objectively and permanently all errors and which can be used with any kind of maze pattern which can be drawn on coordinate graph paper.—*D. E. Johannsen* (Skidmore).

418. **Tinker, M. A. Wundt's doctorate students and their theses (1875–1920).** *Amer. J. Psychol.*, 1932, 44, 630–637.—A chronological list of the 186 theses granted under Wundt's direction from 1875 to 1919, giving the author's name and the title. Judging from the titles the earlier dissertations dealt largely with philosophical topics, while after 1880 the ratio between the psychological and philosophical theses is approximately 3 to 2.—*D. E. Johannsen* (Skidmore).

419. **Tolman, E. C. Lewin's concept of vectors.** *J. Gen. Psychol.*, 1932, 7, 3–15.—A discussion of the differences between Lewin's "environmental field" and the author's "means-end-field." Lewin's "concept of vectors is bad because it attempts to combine into one variable the following three: (C) the variable of the cognitively appreciated directions, distances, and barred-characters in a field; (M) the variable of a fundamental, motivationally conditioned demand-value of the given goal or goals in this field; and (D) the variable of the final subordinate demand-values of the various alternative routes to or from such a goal or goals."—*H. Cason* (Wisconsin).

420. **Wheeler, R. H., & Perkins, F. T. Principles of mental development.** New York: Crowell, 1932. Pp. xxvi + 529. $3.75.—A textbook in educational psychology written from the Gestalt point of view. The book is divided into 26 chapters and presents a discussion of the following major topics: laws of human nature, functions of the nervous system, contributions from animal and child behavior, intelligence, emotions, will, personality, learning, motivation, and discipline.—*W. S. Hunter* (Clark).

421. **Whitmer, C. A. An apparatus for regulating the contact time of an electric current.** *J. Gen. Psychol.*, 1932, 6, 481–482.—*H. Cason* (Wisconsin).

422. **Willoughby, R. R. A classification for psychology.** *J. Gen. Psychol.*, 1932, 7, 179–185.—The present classification was elaborated on the basis of actual material requiring classification in the *Psychological Index*.—*H. Cason* (Wisconsin).

[See also abstracts 412, 652, 671.]

SENSATION AND PERCEPTION

423. **Allen, J. F. The depression and enhancement of auditory sensitivity.** *Phil. Mag.*, 1930, 9, 834–842.—*A. B. Hunter* (Clark).

424. **Ames, A., Jr., & Ogle, K. N. The horopter and corresponding retinal points.** *Ann. Dist. Serv. Found. Optom.*, 1932. Pp. 1–12.—An explanation of what the horopter is and how its form and position indicate the relative size and shape of the ocular images. A new definition of the horopter is presented. The authors state that the experimental work on the horopter has also thrown considerable light on the phenomenon of fixation disparity, a physiological phenomenon which is correlated with phoria actively occurring in binocular vision.—*R. J. Beitel* (Clark).

425. **Angell, F. Notes on the horizon illusion. II.** *J. Gen. Psychol.*, 1932, 6, 133–156.—"We construct for ourselves in geometric space as a result of individual experience a series of fields or spheres of reference in each of which objects are approximately of like largeness or 'might,' and while, with increasing remoteness of a field, a given class of objects has less 'might' there is no clear relation between largeness and distance. Perhaps the most important fact in this connection is the generalization of Götz Martius from his experiments on the 'apparent size of objects': 'One can say that perceived space compared with real space is contracted; the degree of contraction increases with the distance, but not proportionally.' Applying measurement, if one may apply it to these phenomena, we may say that a moon gauged as 30 cm. across indicates a spatial

construct of about 30 meters radius, and other largenesses of the moon, resulting from the general experience and special attention processes of the percipient individual, would give proportional values. . . . The term 'horizon illusion' as popularly used means an apparent enlargement of the disks of the moon or sun when rising or setting, above their size when on high, which is regarded as their standard or 'real' size; it does not mean that what we see as shining disks are 'in reality' huge spheres astronomical distances away. Psychologically, there is more reason for attributing standard or 'real' size to these bodies when on high than at the horizon and, de facto, in some cases, the horizon size has been regarded as standard. But, according to the view adopted here, the horizon moon is one of a series of spatial constructions of which the home, the garden, and the field are more intimate members. Accordingly, we may regard the rising sun or moon qualitatively as much or as little illusory as the largeness of persons in a room or of trees in a field."—*H. Cason* (Wisconsin).

426. **Bjorkman, A., & Göthlin, G. F. Charpentier's Illusion beigerade nach vorn gerichtetem Blick. Experimente und Erklärung.** (Charpentier's illusion for forward vision. Experiments and explanation.) *Skand. Arch. f. Physiol.*, 1930, **60**, 135–142.—In the first part of the article Bjorkman describes the illusion: when a luminous point is fixated in darkness, it soon appears to be moving. Charpentier explains the illusion by unconscious cerebral strain, while others assume eye movements as the cause. Bjorkman used 19 subjects, 17 of whom worked with direct fixation and 2 with indirect vision. The movements seen were variable, being either continuous or saccadic and moving either to the left or the right. When the subject was required to fixate the light image in order to determine the after-effect, a comparison of the movements relative to the entoptic image and the luminous point itself showed a great difference. Göthlin summarizes his previous work on the question of the displacement of entoptic images, in which he found that the phenomenon was due to central activities, to the relation of centripetal influxes. He states that an analogous mechanism is present in the Charpentier illusion in that the unequal fatigue of the eye muscles determining the fixation is followed by an inequality in motor influxes which causes an impression of movement in the direction conditioned by the muscle group which is the most fatigued.—*A. B. Hunter* (Clark).

427. **Bousfield, W. A. The intensive factor in the localization of sound.** *Amer. J. Psychol.*, 1932, **44**, 805–807.—The author suggests a means by which dichotic intensity-differences mediate localization of sound by virtue of their reduction to time-differences.—*D. E. Johannsen* (Skidmore).

428. **Burzlaff, W. Methodologische Beiträge zum Problem der Farbenkonstanz.** (Methodological contributions to the problem of color constancy.) *Zsch. f. Psychol.*, 1931, **119**, 177–235.—This work has its point of departure in Katz's experiments on the genesis of color constancy. The writer began with a gray series with 48 colors. With it numerous individual experiments were performed upon 20 children, from four to seven years old, and five adults. The development of color constancy under various conditions of illumination was tested by four methods. The writer also set himself the problem of analyzing these methods themselves and thereby of accounting for the discrepancy of the results. It appears that the degree of color constancy depends considerably upon the experimental constellation. While, according to some studies, we are inclined to posit an increase in color constancy in children, especially those six or seven years old, this developmental phenomenon is entirely absent if another method is used. Individual differences also vary according to the type of investigation. The more homogeneously the visual field is filled with distinguishable objects, the more intimately connected with life are the experimental conditions and the higher is the color constancy. Parallel experiments on size constancy with children from four to seven years old resulted similarly in wide variation of the results depending upon the method used. Here, too, the spatial structure of the visual field has great influence upon the degree of constancy. The writer likewise studied memory for colors by four methods; here children, much more than adults, have the tendency to over- or under-estimate the brightness of the extreme grays. Katz had previously noted this phenomenon. According to the writer, this occurs whenever it is not compensated by reflection. It is also supported by the fact that children have false linguistic characterizations for colors. They can name only the extreme values, black and white, but carry these names over to all gray-steps lying near them and thus are led to illusions. The results of this detailed study give evidence that the phenomena of color constancy do not depend upon experience and practice. We must assume that it is inborn in us to see surface colors as relatively independent of changes of illumination.—*L. Wentscher* (Köln).

429. **Cave, H. A. Temporal lobe lesions. Disturbances of the visual pathways.** *Calif. & Western Med.*, 1932 (Jan.). Pp. 13.—Cave records the details of four cases of tumor of the temporal lobe, in all of which field defects were of much value in localization of the lesion. In three cases homonymous hemianopia was present—the other showing a quadrantic homonymous loss of field. He stresses the value in localization, more especially as the general and neurological findings showed little more than the presence of a brain tumor. In two of the cases well-marked visual hallucinations were also present.—*R. J. Beitel* (Clark).

430. **Crook, M. N. The sensory aspects of electrical stimulation.** *J. Gen. Psychol.*, 1932, **6**, 49–69.—Using the index finger of the right hand and a 60-cycle current, an introspective study was made of the qualitative attributes of the experience, the locus of excitation, adaptation with weak stimuli, and the

temporal course of adaptation.—*H. Cason* (Wisconsin).

431. **Fallert, F. Untersuchungen über die Wahrnehmung von Bewegungen in den drei Dimensionen der Raumes.** (Studies on perception of movements in the three dimensions of space.) *Zsch. f. Sinnesphysiol.*, 1930, 60, 297–324.—A black band on a white background was set in motion at a given moment by a motor of constant speed. The subject, who was 1.2 meters away, looked at the apparatus through an opening in a large, blackened tube and signaled when he perceived any movement either in the transverse, vertical, or antero-posterior direction. The subject noted with a stop-watch the time necessary for this perception. Speed of movement was regulated for a series of different rates. Near the threshold the time was often around ten seconds. Very different results were obtained according to whether or not the subjects made use of a fixation point. Without any such guiding mark, the minimal speed of perceptible movement was about 0.48 mm. per second regardless of whether the stimulation was monocular or binocular or whether the movement was transverse or vertical, while with a fixation point it was 0.02 mm. A total retinal displacement of 36 μ was found in the first case and 1.7 μ in the second. For a depth displacement without a fixed guiding point, the minimal speed was 63 mm. per second in monocular vision and 30 mm. for binocular vision, while with a guide it was 2.75 mm. The band was 4 mm. in width and could be reduced 50% or doubled without noticeable change in result.—*A. B. Hunter* (Clark).

432. **Ferree, C. E., & Rand, G. Two important factors in the size and shape of the form field and some of their relations to practical perimetry.** *J. Gen. Psychol.*, 1932, 6, 414–428.—The following results were obtained in an investigation of the size of the stimulus and the relation of stimulus to background: (1) The relation of stimulus to background exerts an important influence on the size and shape of the form field. (2) The influence of difference in brightness from the background is much greater for small than for large stimuli. (3) For the larger stimuli, size of field increases rapidly with increase of brightness difference between stimulus and background near the lower end of the scale. (4) The effect of variation of size of stimulus is much greater for small than for large brightness differences between stimulus and background. (5) The gradient of achromatic sensitivity is very steep in the extreme peripheral portions of the field and very gradual in the mid-portions of the peripheral field.—*H. Cason* (Wisconsin).

433. **Fischer, M. H., & Kornmüller, A. E. Egozentrische Lokalisation. I. Optische egozentrische Richtungslokalisation.** (Egocentric localization. I. Localization of optic direction.) *Zsch. f. Sinnesphysiol.*, 1930, 61, 87–147.—The studies deal with the apparent direction of one of a series of spatial coordinates with reference to the right or the left monocular optic center or to the binocular center (cyclopean). The direction was determined by a simple apparatus with respect to the apparent median plane (cyclopean) or the direction of the line of regard straight forward for either the right or the left eye. The authors themselves were the subjects. The oscillations in direction found in experiments repeated several days later gave only a small margin of variation: 1° 21′ at 75 cm. for the binocular median direction, 1° 45′ for the right eye, and 1° 41′ for the left. It was found that the binocular median direction might be systematically deviated, being toward the left for one of the authors. When the subject was asked to designate the binocular median direction in monocular vision, it was deviated toward the side of the eye used. When he was asked to look very intently to the right or the left preliminary to his decision, the median direction for binocular vision underwent certain deviations: at first it was in the direction of the preliminary movement, then in the opposite direction, and finally it arrived at its proper location. When the subject had to designate the binocular median direction at the moment when he was looking either to the right or to the left, there was no deviation up to 10° for the right eye and 5° for the left, but after these points a deviation occurred in the direction of the line of regard, reaching 10° and 11° at 25° through a lack of sufficient compensation. Rotation of the head or of the trunk also brought about modifications in the apparent median direction. Determinations were also made for vertical directions.—*A. B. Hunter* (Clark).

434. **Geldard, F. A. Foveal sensitivity as influenced by peripheral stimulation.** *J. Gen. Psychol.*, 1932, 7, 185–189.—The author had previously found that the sensitivity of a given area of the retina is dependent upon conditions of stimulation in neighboring areas. R. Granit (*Amer. J. Physiol.*, 1930, 94, 41–50) used the critical frequency of flicker as a measure of sensitivity, and under conditions of multiple foveal stimulation no appreciable interaction could be found. The purpose of the present experiments was to determine whether or not interaction is dependent upon continuous stimulation. "The critical frequency of flicker presents no unusual problems in the measurement of retinal sensitivity. If the concept be allowed, it may be thought of as a measure of 'temporal visual acuity' as contrasted with 'spatial visual acuity' which is ordinarily measured directly in terms of threshold brightness or separation of contours."—*H. Cason* (Wisconsin).

435. **Hoagland, H. A basis for cutaneous localization.** *J. Gen. Psychol.*, 1932, 6, 468–470.—Discussion of an article by the same author, *Specific Afferent Impulses and Cutaneous Sensibility*, *J. Gen. Psychol.*, 1932, 6, 276–295.—*H. Cason* (Wisconsin).

436. **Keen, A. M. Protective coloration in the light of Gestalt theory.** *J. Gen. Psychol.*, 1932, 6, 200–203.—Several Gestalt principles of visual perception were stated in Abbot Thayer's book, *Concealing Coloration in the Animal Kingdom* (1909).—*H. Cason* (Wisconsin).

437. **Kestenbaum, A. Zur Klinik des optokinetischen Nystagmus.** (On the clinical study of optokinetic nystagmus.) *Arch. f. Ophth.*, 1930, 124, 339–369.—The author discusses the physiology and pathology of different eye movements and studies the correlation between optokinetic nystagmus and the movements composing it, using the classic theory of Bárány. In the first clinical case cited he found a saccadic form of the pursuit response towards the left and the absence of any optokinetic nystagmus on the right. A left lesion was present. A parallel amelioration of the two disturbances showed that the slow phase of nystagmus and the normal pursuit response were closely connected. A second case, which involved a disturbance in the voluntary displacement of fixation towards the left with an absence of optokinetic nystagmus towards the left, showed that the rapid phase of the latter was connected with voluntary fixation. In optokinetic nystagmus and perhaps in vestibular nystagmus also, voluntary fixation consists in bringing back the eyes, which have been deviated from their fixation point during the slow phase, into a central direction, the optic and proprioceptive reflexes playing only a secondary rôle.—*A. B. Hunter* (Clark).

438. **Kravkov, S. W. Ueber den scheinbaren Unterschied zwischen Sukzessiv-Kontrast und Komplementärfarben.** (On the apparent difference between colors obtained from successive contrast and complementary colors.) *J. f. Psychol. u. Neur.*, 1929, 38, 282–291.—The author explains the displacement of the negative after-image toward red as due to the fact that the negative after-image is the complement, not of the initial color, but of the color resulting from the chromatic fatigue. This fatigue is maximal for violet and minimal for green. Therefore, the color of a continuous stimulus moves towards green, and the complementary color, which determines the negative after-image, approaches red. Twelve subjects, after a 15-second period of stimulation with indigo 453 mμ or yellow 572 mμ (complementary colors), were asked to determine the color of the negative after-image, which was projected on a white background adjacent to an Ostwald color schema. All the subjects chose as the nearest colors 586 mμ and Ostwald's purple 43. Using Lasarev's formulae and expressing K in terms of C′ (the final concentration of the products of decomposition due to the monochromatic source) and the energy (ϵ) absorbed by the corresponding photosensitive substance, Kravkov found that the following values must be given to K: —0.8 for green, —0.6 for red, and —0.05 for violet. The determination of the apparent color of 450 mμ, 462 mμ, and 571 mμ after a 15-second stimulation (4 subjects) showed that both the indigo and the yellow approached the green. The author determined, finally, the relative values of $K = \frac{C'}{\epsilon}$ for green, red, and violet, using data from his former experiments in terms of Lasarev's formula for C′ and Judd's coefficients for brightness: 0.91, —1, and —0.18.—*A. B. Hunter* (Clark).

439. **Kreezer, G. A critical examination of the investigations of auditory action currents.** *Amer. J. Psychol.*, 1932, 44, 638–676.—The questions which the present paper undertakes to analyze are: (1) "Does any single investigation provide conclusive evidence that the microphonic effect which was detected is due to action currents of the acoustic nerve? (2) To what extent do the different investigations consider the same problems and obtain corroborative results?" The author considers the means of producing the electrical phenomena ("microphonic effect") which result when an active electrode is placed on or near the auditory nerve and the other on nearby muscle or brain tissue, and criticizes the techniques used. He then analyzes the chief experiments, based on microphonic effects, which claim to substantiate the frequency theory of hearing, since the authors hold that the microphonic effect detected by them was due to the action current of the auditory nerve. Kreezer concludes from his summary that none of the investigations give "decisive experimental proof that the microphonic effect is due to action currents in the auditory nerve. . . . Hence, it is not possible as yet to conclude, on the basis of this evidence, that the frequencies of auditory stimuli are retained in the response of the nerve."—*D. E. Johannsen* (Skidmore).

440. **Kurtz, J. I. Physiological and psychological causes of ocular fatigue.** *J. Gen. Psychol.*, 1932, 7, 211–214.—The author claims that "the seeing specialist must open his mind to physiology as well as psychology."—*H. Cason* (Wisconsin).

441. **Macdonald, P. A., & Allen, J. F. The psychophysical law. I. The sense of vision.** *Phil. Mag.*, 1930, 9, 817–827.—*A. B. Hunter* (Clark).

442. **Macdonald, P. A., & Allen, J. F. The psychophysical law. II. The sense of audition.** *Phil. Mag.*, 1930, 9, 827–834.—A. *B. Hunter* (Clark).

443. **Macdonald, P. A., & Robertson, D. M. The psychophysical law. III. The tactile sense.** *Phil. Mag.*, 1930, 10, 1063–1072.—*A. B. Hunter* (Clark).

444. **Mathieu, J. Erziehung zum exakten optischen Auffassen und Einprägen nach der Poppelreuterschen psychokritischen Methodik.** (Training to exact optical comprehension and impression by the Poppelreuter psychocritical method.) *Zsch. f. angew. Psychol.*, 1932, 41, 366–424.—Maps and diagrams are increasingly used in schools; technical drawings practically constitute the language of engineers; scientists and medical men likewise depend on the accuracy of their visual perception and visual memory. A knowledge of the degree to which such visual perception and memory are trustworthy and the extent to which they may be improved by training is very important. The author investigated these problems (1) with elementary meaningless figures, (2) with geographic maps, (3) with mechanical drawings, and (4) with electrical diagrams. His results indicate that most people are at first unable to observe accurately and reproduce impressions from memory, but by being taught to understand the na-

ture of their mistakes they may enormously improve their performance. Psychocritical training, even with a very limited subject matter, tends to improve accuracy in other mental activities; but such training is difficult because most people have a natural reluctance to face their own mistakes or to admit to themselves their own ignorance. People tend to prefer positive (though false) solutions, and having once jumped at a conclusion, they dislike to change their minds. In the experiments the subjects were instructed to look at a given drawing until they believed they could reproduce it accurately from memory. Two series of ten drawings each were given before the beginning of training. Most observers thought the task very easy, were astounded when shown their own mistakes, and tried to justify themselves by blaming the conditions of experimentation. It is necessary first to convince the subjects that all mankind is disposed to autistic, unclear, emotionally biased observation and thinking, and then to help them realize how these faults permeate their own work. It is extremely important to avoid giving the subject any feeling of personal inferiority. Most people tend to sacrifice accuracy to speed, and must be cautioned to take plenty of time. A third series of ten drawings showed improvement resulting from insight, and a fourth series, after an interval of four months, indicated lasting benefits from insight once gained. Short bibliography.—*M. F. Martin* (West Springfield, Mass.).

445. **Neuhaus, W. Mikropsie bei Einengung des Gesichtsfeldes.** (Micropsia through narrowing of the visual field.) *Untersuch. z. Psychol.*, 1929, 7. Pp. 31.—The author gives a group of quantitative studies on the apparent size of objects seen through a tube. The objects always seemed to diminish in size as the visual field was reduced. The relative diminution was nearly constant, though the extent of the object might vary: 8.2% on an average for 10 mm. objects seen at a distance of 2 m. and 9.9% for 15 mm. objects. When all other conditions remained equal, micropsia was increased with the distance away of the observed object. A second phenomenon was the growth in brightness of the narrowed field, especially along the edges. This phenomenon was not linked with the preceding phenomenon. It was the effect of contrast and could be suppressed or reversed by illumination of the tube. However, the micropsia persisted. This experiment and the additional fact that micropsia permitted clear vision caused the author to reject the hypotheses usually advocated, which involve dilation of the pupil, adaptation to darkness, change in accommodation, or localization according to depth. He recalls the fact that apparent size is not strictly determined by the retinal image, for an object which is slowly approached keeps its same size and the monocular fixation of a near object diminishes the size of far objects. Likewise, we should be willing to admit a change in our scale of sizes in the case of narrowing of the visual field.—*A. B. Hunter* (Clark).

446. **Ohm, J. Zur Augenzitternkunde. 16. Mitteilung. Der optokinetische Nystagmus bei Rotgrünblindheit.** (On eye tremors. 16. Optokinetic nystagmus in the case of red-green blindness.) *Arch. f. Ophth.*, 1930, 123, 532–536.—Results from one subject only are given. When the subject observed movements of black and white striae, his nystagmus showed an exceptionally high frequency (up to five per second) which then decreased slowly. With red and green striae seen simultaneously (the red striae were pasted on a green cylinder), the frequency was still noticeable (up to 3.5 per second), but it decreased rapidly, becoming irregular. The author thinks that the frequency in this case might have been less under a better technique.—*A. B. Hunter* (Clark).

447. **Ohm, J. Zur Augenzitternkunde. 17. Der optokinetische Nystagmus bei retrobulbärer Neuritis.** (On eye tremors. 17. Optokinetic nystagmus in a case of retrobulbar neuritis.) *Arch. f. Ophth.*, 1930, 124, 128–138. **18. Ueber den Einfluss des Augenzitterns der Bergleute auf Sehen und Arbeitsfähigkeit gemäss den Angaben der Kranken und der objektiven Untersuchung.** (18. On the influence of miners' nystagmus on vision and work capacity, according to the reports from patients and from objective examinations.) *Ibid.*, 674–692. **19. Der Beginn eines Anfalls von Augenzittern.** (19. The beginning of an attack of nystagmus.) *Ibid.*, 125, 86–102. **20. Zum 2,000 Fall von Augenzittern der Bergleute (Rückblick). 21. Kritisches.** (20. Apropos of 2,000 cases of miners' nystagmus. 21. Critical review of previous work.) *Ibid.*, 245–266; 463–480.—The author has completed ten years of study on normal and pathological nystagmus. The perfecting of his apparatus and method has given him an objective process which can be used to aid in the diagnosis of many ocular and cerebral disturbances. For example, he cites a serious case of retrobulbar neuritis affecting successively the patient's two eyes without showing any objective manifestation, but he was able to follow the evolution of the case through a registration of the optokinetic nystagmus for various areas of stimulation and various sizes of striae. He studied, not only the frequency of the nystagmus, but also the extent of the recoils. Frequency was found to be the most characteristic factor present in the evolution of the disturbance. In the second article he describes various forms of nystagmus as found in 28 miners. The third article gives his observations on cases of spontaneous or aroused nystagmus. Finally, he discusses the results from his work on 2,000 cases which he has collected and studied during the last ten years. He finds that nystagmus always results from the action of several muscles, four being involved in the simplest cases. The frequency is always the same for the tremors of both eyes, though the extent of the disturbance may be very different in the two cases. Therefore he assumes the presence of a higher center, the activity of which is influenced by four pathways, viz., the optic, labyrinthine, neck reflex, and cortical pathways. He

says of this center that "it produces in turn electromagnetic oscillations which, because of their low frequency and weak intensity, need a nerve prolongation, just as an antenna is necessary for the reception of weak waves."—*A. B. Hunter* (Clark).

448. **Pikler, J. Ueber die Konstanz der Raumwerthen der Netzhautstellen für das Blick.** (On the constancy of the spatial value of retinal points for vision.) *Zsch. f. Psychol.*, 1930, 115, 194–207.—The author caused the two Müller-Lyer figures to move along the line of vision from one end to the other of the main line (which appears, as we know, to be larger or smaller according to the direction of the auxiliary lines). He observed the movements of his subjects' eyes and judged the relative amplitudes. He found that the larger amounts of eye displacement corresponded to the figures which seemed to be the larger. He also showed his subjects drawings and photographs of objects represented as being in pronounced relief, and observed the modifications which took place in convergence when the attention passed from one depth plane to another. On these observations he builds his theory. The spatial values of the retinal points are not constant, for the apparent size varies with the Müller-Lyer illusion, although the retinal image does not vary. The retinal images of a real object and its photograph are not superposable, although they produce the same depth effect. The constancy factor is found in the ocular movements which correspond to the retinal images and which may be the basis of spatial perception.—*A. B. Hunter* (Clark).

449. **Pollock, K. G., & Bartlett, M. A. Psychological experiments on the effects of noise.** *Indus. Health Res. Board*, 1932, Rep. No. 65. Pp. 1–37. 1/3 net.—An account is given of preliminary experiments on the psychological effects of vibration and noise, and more detailed work on the effects of noise. Full experimental details are given. In general it is shown that noise has an initial, but not very great, detrimental effect on simpler motor and mental work, but that either through automatization of the task, or through ready adaptation to noisy conditions, this detrimental effect rapidly diminishes. Reasons for popular views concerning the markedly adverse effects of noise are discussed.—*F. C. Bartlett* (Cambridge, England).

450. **Préobrajensky, B. S., & Baranova, L. I. Des altérations anatomo-pathologiques de l'appareil auditif dans le jeûne aigu, d'après des expériences animales portant sur le cobaye et la souris blanche.** (Some anatomico-pathological alterations of the auditory apparatus during total abstinence from food according to some experiments performed on guinea pigs and white mice.) *Acta Oto-Laryngol.*, 1932, 18, 1–20.—The nervous elements of the auditory mechanism, like all other nervous tissue, withstood starvation much better than the other tissues of the body. However, the ganglion cells of the spiral ganglion and of the vestibular ganglion showed marked changes and degeneration. No visible alterations were found either in the organ of Corti or in the fibers of the cochlear and vestibular nerves. The changes that were found are probably due to auto-intoxication, a condition usually given as the cause of death during fasting and a condition to which the ganglion cells are very sensitive. Bibliography.—*M. B. Mitchell* (George School, Pa.).

451. **Purdy, D. M. The measurement of retinal illumination.** *J. Gen. Psychol.*, 1932, 7, 189–192.—The accurate calculation of retinal illuminations is impossible unless the pupil is actually measured under the given experimental conditions, or unless the more convenient method is adopted of using an artificial pupil, or its equivalent, of known, constant aperture.—*H. Cason* (Wisconsin).

452. **Ross, N. The postural model of the head and face in various positions (experiments on normals).** *J. Gen. Psychol.*, 1932, 7, 144–162.—Using three physicians and one lay individual as subjects, an introspective study was made, with the subject in different positions, of such matters as what the subject felt in various parts of the head, the accompanying visual impressions, and the location of sensations with reference to the surface of the head.—*H. Cason* (Wisconsin).

453. **Schliebe, G. Über motorische Synästhesien.** (On motor synesthesias.) *Arch. f. d. ges. Psychol.*, 1932, 85, 289–330.—It had been noticed that when using Sander's movement apparatus, especially when making the smaller movements, the subject frequently received sensations of light. Previous literature shows that there is no color in motor synesthesia, but differences in brightness which persist a short time after the movement has stopped, and are not influenced by movements of the head. Schliebe gives the results of his experiment first by quoting the introspections of his subjects, and second by summarizing the conclusions drawn from these introspections. He finds that *Photismen* come with rhythmical arm-movements which must take place with a certain speed. If the movements are too fast or too slow, the synesthetic experience is threatened. The greater the participation of the whole psychophysical organism the greater is the probability of eliciting the *Photismen*. A bibliography of 36 titles is appended.—*F. J. Gaudet* (Dana).

454. **Sutton, D. C., & Lueth, H. C. Pain: time of occurrence following temporary coronary occlusion.** *Proc. Soc. Exper. Biol. & Med.*, 1932, 29, 1080–1081.—The ramus descendens branch of the left coronary artery in dogs was constricted. The pain response appeared immediately upon the constriction of the flow of blood, but the time was too short to be accurately measured. The animals showed some variability in degree of response due to a number of factors. The discrepancy in time required to produce pain by the method described above and the time required by occlusion of a peripheral artery (brachial) used by Lewis was due partly to a difference in the definition of pain and partly to the relative degree of shock by the two methods. The coronary method gave a much shorter time than did the brachial method.—*M. O. Wilson* (Oklahoma).

455. **Taylor, C. D., & Tinker, M. A. The effect of luminosity on the apprehension of achromatic stimuli.** *J. Gen. Psychol.*, 1932, 6, 456–458.—The amount of luminosity contrast between stimulus and background is one factor in the visual perception of letters.—*H. Cason* (Wisconsin).

456. **Thiel, C. Experimentelle Beiträge zur Lehre vom Vibrationssinn.** (Experimental contributions to the theory of the vibrational sense.) *Zsch. f. Psychol.*, 1931, 119, 109–176.—This work was performed in the Psychological Institute at Rostock under Katz, who was the first to refer to the independent status of the vibrational sense. The relatedness of this sense to the auditory sense makes possible a great enrichment and facilitation in the instruction of deaf mutes; hence the studies are extraordinarily significant even for practice. They aim to compare vibratory and auditory functions with each other. The writer found the lower limen for the vibratory perception of the finger to be 82.8 vibrations, while the lower limen for hearing is 16. The upper vibratory limen lies at about 528 vibrations, the auditory between 20,000 and 25,000. Thus we hear ten octaves, but perceive vibrations with the body only within two and a half octaves. Differential sensitivity in hearing, however, is scarcely superior to that in the vibrational sense. Experiments on localization, even with complications, gave positive results almost throughout. The hands and feet seem preeminently suited for the reception of vibratory stimuli. Just as in audition, even very small time differences are effective for the vibrational sense. The limit at which localization is still possible seems to lie at 1/7,000 sec. If the two ears are stimulated, 1/20,000 of a second is still sensed as a difference. In both cases, the time difference appears as an experience of spatial direction. A parallel phenomenon is also found in vision. The more closely the time difference approaches the limiting value, the clearer does the localization become. This law holds likewise in vision and audition. Although we have as yet no explanation for this phenomenon, it must be accepted as a fact. The investigations show quite unmistakably that we must consider sensory surfaces of the body which are situated symmetrically—particularly the hands and feet—as organs of one vibrational sense bifurcated outwardly, like the eyes and ears.—*L. Wentscher* (Köln).

457. **Truöl, H. Die Beeinflussung der Schwellen für kurzdauernde Helligkeitsänderungen durch eine zweite ebenmerkliche Aufhellung an beliebiger Stelle.** (The influence of the threshold for short-lasting changes of brightness through a second just noticeable increase of brightness at any place.) *Arch. f. d. ges. Psychol.*, 1932, 85, 467–528.—The author studies differences in the threshold for different points when the subject's attention is upon the fixation point, upon the whole field, upon two points simultaneously, and upon a point to the side of the fixation point. The apparatus used is described and illustrated. Four subjects were used. The first task is to calculate the normal threshold for each of the 21 points. These points are arranged in concentric circles. The results are similar to those obtained by Guratzsch, namely, that the threshold increases as the distance from the center increases. He also finds that the relative threshold is significantly correlated with the normal threshold (in the high 70's). Although the threshold increases when attention is directed to two points, the form of attention is also important.—*F. J. Gaudet* (Dana).

458. **Van Der Waals, H. G., & Roelofs, C. O. Optische Scheinbewegung.** (Apparent optic movement.) *Zsch. f. Psychol.*, 1930, 114, 241–288; 115, 91–190.—The first part of the article, which was written by two Amsterdam physicians, is devoted to their experimental work on visual movement. The apparatus used allowed them to vary separately the principal factors involved, particularly the duration of exposure and the time intervals. These intervals were sometimes positive, sometimes zero, and sometimes negative, that is, there was a partial coincidence in the time of the two stimuli. In all these cases apparent movement was obtained. The subject had to distinguish two objects which were at a certain moment simultaneously visible, the first movement disappearing and the second appearing in this case. Then, with other exposure and interval values the experimenters caused a passing of the object from duality to unity. Finally they brought about an "ideal movement" in which a single object moves from the first to the second position, the conditions of the experiments being accurately determined by systematic variations of one of the factors (exposure) for each constant value of the other (interval). The influence of fixation was studied, together with the distance between the objects, the luminosity, and the influence of the particular color used. Later they made exposures at right angles, in prolongations of the same path, etc. In the second part of the article the authors discuss the various current theories and deal with the variations and lack of agreement found both in the theories and the experimental results of Exner, Bourdon, Wertheimer, Koffka, etc. Against Wertheimer and others, the authors insist that in true optimal movement one really sees the object cross the field, and they deny the existence of any movement without an object. Many disagreements can be explained perhaps by the fact that, when working under defective conditions and with exposure times which were too short, certain authors have not really seen the true optimal movement. The theory proposed makes the apparent movement the consequence of changes brought about in the localization of the perceived objects.—*A. B. Hunter* (Clark).

459. **Volkmann, J. The method of single stimuli.** *Amer. J. Psychol.*, 1932, 44, 808–809.—A note giving definitions of several terms in common use in psychophysical studies, particularly those having to do with absolute judgments and methods.—*D. E. Johannsen* (Skidmore).

460. **Walthard, K. M., & Weber, A. Zur Chronaximetrie der normalen Hautsensibilität des Menschen.** (Chronaximetry of normal human skin

sensitivity.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 140, 67–88.—Sensory chronaxy varies, according to experimental conditions, between 0.10 and 0.39 sigma. The chronaxy of pressure-spots is 0.09–0.34 sigma, that of pain-spots 0.27–0.60 sigma. The chronaxy of the volar side of the arm is less than that of the other side. Distal and proximal regions of one side of the arm give like chronaxies. Homologous fields of the right and left sides of the body have like chronaxies. Chronaxies of the fingertips may be as low as 0.09–0.15 sigma. Important factors in determining chronaxy are (1) the size of the electrodes used, (2) the kind of subjective sensation being tested, and (3) fatigue in the sense-organ. The chronaxy-apparatus is valuable for clinical studies.—*C. W. Fox* (Rochester).

461. **Zigler, M. J. Pressure adaptation-time: a function of intensity and extensity.** *Amer. J. Psychol.*, 1932, 44, 709–720.—The problem of the present study was two-fold: to determine (1) whether the adaptation time to continued cutaneous stimulation varies with the intensity and extensity of stimulation, and (2) whether the adaptation times for continued stimulation and for the reestablishment of normal equilibrium afterward are essentially of the same magnitude or different. The two sets of 5 stimuli each were made of composition metal. The intensity set all had the same diameter (1 cm.), and varied in weight from 50 to 2000 mgm. The extensity set all had the same weight (500 mgm.) and varied in size from 5 to 25 mm. in diameter. Four cutaneous regions were stimulated with the intensity set and two with the extensity set. O's were asked to report the course of adaptation. Results indicate that adaptation time is directly proportional to the intensity of stimulation and inversely proportional to area, with fairly wide variations. In the second part of the experiment, on the course of adaptation after the removal of the stimulus, it was found that the adaptation time on removing the stimulus is roughly of the same magnitude as that for adaptation to the continued application of that stimulus. It is pointed out that these results tend to substantiate the quantitative type of theory, since a linear relationship appears to prevail between the amount of stimulation and the adaptation time. It is suggested that the essential nature of adaptation of the receptor may be explained by the bipolar electrochemical unit theory of Crile.—*D. E. Johannsen* (Skidmore).

[See also abstracts 393, 401, 406, 462, 468, 488, 498, 526, 532, 579, 622, 624, 705, 715, 727, 775.]

FEELING AND EMOTION

462. **Converse, E. The relation of bright and dull pressure to affectivity and the method of correlation.** *Amer. J. Psychol.*, 1932, 44, 740–748.—This study was undertaken to throw more evidence upon the relation between P and U, and pressure. Nafe claims that P and U are bright and dull pressures. Young claims that Nafe's results were a function of the laboratory instructions. Hunt recently (*Amer. J. Psychol.*, 1931, 43, 87–92), reported reliable *r*'s in an experiment in which O's were first instructed to report on P and U of colors, and a week later on the bright and dull pressures. He favors the theory that P and U are accompanied by pressures. Converse repeated Hunt's experiment, using colors, simple tones, and musical phrases as stimuli, and obtained *r*'s ranging from .89 to —.98. Using the antithetical word-pair "personal-impersonal," and repeating the experiment (O was asked to rate colors as P or U one week, and next week as personal or impersonal), *r*'s ranging between .54 and .87 were found. The author holds that high correlations can readily be produced between unrelated variables merely because of the indirect suggestion effect of the instructions and the experimental set-up.—*D. E. Johannsen* (Skidmore).

463. **Enke, W. Die Affektivität der Konstitutionstypen im psychogalvanischen Versuch.** (The affectivity of constitutional types in the psychogalvanic experiment.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 138, 211–237.—The affectivity of pyknics, leptosomes and athletics was studied by means of the psychogalvanic phenomenon. About 100 subjects participated. There are essential differences in nervous excitability, both in susceptibility and in tenacity or duration, between the three types. The degree of inner affective susceptibility is, on the average, about twice as strong in the leptosomes as in the pyknics. In leptosomes, the inner excitation lasts about 12½ minutes, in the pyknics only about 9 minutes. The athletics were more strongly excited affectively than the pyknics, but they returned to a state of calm much more quickly than did the leptosomes. Similar results appeared in experiments involving expectation. The great difference in the affective behavior of the leptosomes and the pyknics suggests that the affectivity-form of a constitutional type plays a dominating rôle in the individual's behavior as a whole. Cyclothymes react strongly to light pain-stimuli, while many schizothymic subjects, in spite of their general affectivity, react only slightly. The greater sensitivity of pyknics to vital feelings is thus demonstrated experimentally. The results point toward close relationships between constitutional affectivity-form and the vegetative nervous system and the endocrine system. No significant sex differences appeared.—*C. W. Fox* (Rochester).

464. **Flemming, E. G. Emotion, intelligence, and introversion.** *J. Gen. Psychol.*, 1932, 7, 201–205.—The Thorndike Examination for High School Graduates, the Colgate Schedule C2, and parts of the Pressey X-O test were used in studying the relations between intelligence and emotion, between introversion and emotion, and the interrelations between the intensity, variability, deviation, and consistency of emotional responses.—*H. Cason* (Wisconsin).

465. **Jenness, A. The effects of coaching subjects in the recognition of facial expression.** *J. Gen. Psychol.*, 1932, 7, 163–178.—Training subjects in the analysis of facial expressions caused an average increase in the scores on a facial expression test.—*H. Cason* (Wisconsin).

466. **Jenness, A. Differences in the recognition of facial expression of emotion.** *J. Gen. Psychol.*, 1932, 7, 192–196.—The facial expressions of 14 of the Rudolph pictures selected by Langfeld were judged by 196 male and 340 female college students. The women showed a slight superiority over the men in judging facial expression.—*H. Cason* (Wisconsin).

467. **Ledgerwood, R. A comparison of methods of determining the affective value of words.** *Amer. J. Psychol.*, 1932, 44, 796–797.—The problem of the present study was to investigate the application of the methods of paired comparisons and order-of-merit to the esthetic judgment of verbal material. The material was a series of 20 artificial words chosen from a novel (*The Silver Stallion*). The judges were 7 members of a class in experimental psychology. The r between the ratings of the words by the two methods was +.96. The average agreement between the judges by the method of paired comparisons was .48, and by the method of order-of-merit, .44; when both methods were combined the agreement was $r = .46$.—*D. E. Johannsen* (Skidmore).

468. **Young, P. T. The relation of bright and dull pressure to affectivity.** *Amer. J. Psychol.*, 1932, 44, 780–784.—Using as stimuli 43 words descriptive of "bright" and "dull" pressures, 242 university students were given an affective-association test, the S's being instructed to report whether the words suggested P or U. Then E read the list of "bright" pressure descriptive terms, and asked the S's to report whether the whole list suggested P or U. This was repeated with all the "dull" pressure descriptive terms. The results clearly demonstrate that words descriptive of "dull" pressure suggest U, and words descriptive of "bright" pressure suggest P. The author concludes that Hunt's high r between reports on pressures and reports on P or U (*Amer. J. Psychol.*, 1931, 43, 87–92), is dependent upon the suggestion effect implicit in the instructions.—*D. E. Johannsen* (Skidmore).

[See also abstracts 616, 669.]

ATTENTION, MEMORY AND THOUGHT

469. **Anastasi, A. Further studies on the memory factor.** *Arch. of Psychol.*, 1932, No. 142. Pp. 60.—The studies concern the problem whether memory may be considered a unitary and differentiable mental trait. The reader is referred to the 1930 study by the same author. In Part I 140 college women were given four memory tests, two verbal and two numerical. In Part II, 170 subjects from the same population were given ten tests. In Part III an analysis of logical recall and recognition was undertaken. The chief conclusion is that we cannot refer to a single common factor running through *all* forms of memory. In Part II it was found that logical recall and recognition correlate with each other .74. Alleged superiority of recognition over recall scores does not hold for logical memory. The two processes are closely related when similar material is employed. The material appears more potent than the method in determining inter-test correlations.—*E. M. Achilles* (Columbia).

470. **Barker, R. G. Factors influencing transfer between finger mazes.** *J. Gen. Psychol.*, 1932, 6, 115–132.—A study was made of the extent to which knowledge of a human finger maze of one pattern is transferred to mazes of different patterns.—*H. Cason* (Wisconsin).

471. **Bowers, H. Factors influencing visual imagery for letter groups.** *Amer. J. Psychol.*, 1932, 44, 775–779.—Normal-school students were asked to rate the letters of the alphabet (lower case, 12-point typewriter) and groups of 2, 3, and 4 (meaningless) letter combinations as to their ability to arouse clear and distinct visual images, classifying them in 6 arbitrary groups. Results showed that small but very consistent differences exist between letters with respect to the mean distinctness of their visual images. In the letter groups the distinctness of the first and last letters are more important than the mean distinctness of all letters in contributing to the distinctness of the total.—*D. E. Johannsen* (Skidmore).

472. **Brunswik, E., Goldscheider, L., & Pilek, E. Untersuchungen zur Entwicklung des Gedächtnisses.** (Investigations of the development of memory.) *Zsch. f. angew. Psychol.*, 1932, Beiheft 64. Pp. viii + 158.—As the sub-title indicates, this work is an "experimental statistical comparison of the development of linguistic and objective, perceptive memory for simple material, configurations and meaningful structures in boys and girls from 6 to 18 years of age." Altogether more than 800 subjects were used. The following developmental law is formulated: Memory for material reaches its prime first, then memory for form, and still later memory for meaning. These varieties of memory are three different functions. No monistic theory, either associationistic or configurational, can explain memory. The development of memory agrees with Karl Bühler's theory of three stages of development (instinct, training, intellect), and its rhythm with Charlotte Bühler's doctrine of phases. Boys tend to be oriented toward objects formalistically, analytically, abstractly, linguistically, indirectly; girls face the objects empirically, realistically, associatively, integratively, directly. Memory and accomplishment in school are positively correlated.—*C. W. Fox* (Rochester).

473. **Crafts, L. W. Primacy and recency in the learning of visual diagrams.** *Amer. J. Psychol.*, 1932, 44, 763–767.—Using perceptual material instead of the customary verbal or motor material, the present experiment attempted to discover the significance of primacy and recency. The figures were irregular arrangements of circles, lines, and irregular figures, divided into four parts, and presented in a continuous series, followed by immediate graphic reproduction. The results showed with no important exceptions that the parts presented first

and last were reproduced better than the parts in the two intermediate positions.—*D. E. Johannsen* (Skidmore).

474. **Dunkelberger, G. F., & Rumberger, E. K. Perceptual insight as it is related to academic classes: an experimental study.** *J. Gen. Psychol.*, 1932, 6, 216–220.—*H. Cason* (Wisconsin).

475. **Ewert, P. H., & Lambert, J. F. Part II: The effect of verbal instructions upon the formation of a concept.** *J. Gen. Psychol.*, 1932, 6, 400–413.—A study was made of the influence of the set following minimal, standard, and maximal instructions upon the ability to transfer discs on circles in a certain way with the least number of moves. Increasing the instructions decreased the average number of trials, the excess moves, and the learning time, and increased the variability of the scores. Formation of a concept and intelligence test deciles were positively correlated.—*H. Cason* (Wisconsin).

476. **Eysymontt, M. Uwagi krytyczne dotyczace badania typow wyobrazeniowych.** (Some critical observations apropos of the method used in the study of imagery types.) *Polsk. Arch. Psychol.*, 1930, 3, 244–277.—Eysymontt's studies, which are based on the work of Segal and the purpose of which is the determination of the relation between imagery types and vividness of recall, he believes to refute the use of the classical method. The method consists in the use of tables of 12 consonants which the subject has to learn by heart. The material is presented in three different ways: the subject may read it in any way he wishes, he is required to read it with certain obstacles imposed (e.g., the repetition of the syllable *la*), and the experimenter reads it aloud to the subject. The three types of imagery are supposed to be equally represented, and the subject's type is assumed to be determined by his choice of reproduction elements, viz., visual, auditory, or motor. Eysymontt analyzes the results obtained and shows that the method is, at best, of use only for the determination of types of learning and memorizing and not for the determination of imagery types. Advantage is given to the auditory and motor types, and furthermore, these two can be separated only with difficulty. He found that immediate reproduction was independent of any type, though it favored in general the auditory-motor elements. Differences between immediate and deferred reproduction existed only in the mental attitude of the subject: in the former case his attention was directed to the reaction; in the latter, to the stimulus. The mental attitude of the subject was found to be dependent upon a great number of factors, both external (conditions of the experiment, such as exposure time, length of series, etc.) and internal (such as the subject's willingness, fatigue, etc.).—*A. B. Hunter* (Clark).

477. **Jacobson, E. Electrophysiology of mental activities.** *Amer. J. Psychol.*, 1932, 44, 677–694.—Granting that one of the fundamental problems in psychology is the determination of what occurs in the organism simultaneous with and indispensable to mental activities, the author feels that the goal is not the Weber-Fechner relationship between sensation and stimulus, but rather the measurement of nervous and muscular changes specific to the activity involved. During a period of complete relaxation S's in the present experiment were instructed to perform certain mental acts. Thermionic amplification was used with a string galvanometer, and the fluctuations photographed. The mental activities of imagination, recollection, and thinking were studied. The action current produced was quite specific to the part which was imaginatively moved; e.g., in visual imagination movement of the eye-balls was the rule; with thinking brief contractions in muscles of tongue and lips occur; when S is asked to imagine or recollect movement in a specific muscle, slight contractions occur in that muscle. These action potentials are very different from the galvanic reflex.—*D. E. Johannsen* (Skidmore).

478. **Jaensch, E. Ueber den Aufbau der Wahrnehmungswelt und die Grundlagen der menschlichen Erkenntnis. II Teil. Ueber die Grundlagen der menschlichen Erkenntnis. IV. Grundriss der Kategorienlehre auf die Grundlage psychologischer Strukturtypologie.** (On the structure of the perceptual world and the bases of human knowledge. Part II. On the bases of human knowledge. IV. Outline of the doctrine of categories on the basis of psychological structure-typology.) *Zsch. f. Psychol.*, 1931, 119, 1–108.—The doctrine of categories here presented rests upon an empirical study of a priori forms of thought, involving a typological analysis of the different structural types of thought and knowledge. These structures are similar in kind to the fundamental structures of the transsubjective world. Two general types of structure are recognized: (1) The disintegrated A-structure, involving physicoform thinking, i.e., thinking which is directed toward the discovery of causal relationships, which recognizes no teleology, and which sees the part as distinct from and uninfluenced by the whole. Its philosophy is predominantly realistic and its science positivistic. It involves perceptual processes based on an invariant correspondence between stimulus and sensation. (2) The integrated B-structure, involving ideoform thinking, i.e., thinking which is directed toward the discovery of meaningful and teleological relationships, and which sees the whole as more than the sum of its parts. The goal of ideoform thought is "understanding," and its philosophy is predominantly idealistic. The expression of these two types of structure is studied in detail in connection with various levels of life process. Both structures are found in every individual, but with varying emphasis.—*R. B. MacLeod* (Cornell).

479. **Johannes, T. Der Einfluss der Gestaltbindung auf das Behalten.** (The influence of the binding character of the Gestalt upon retention.) *Arch. f. d. ges. Psychol.*, 1932, 85, 411–466.—An attempt to determine whether unity of form, as found in the Gestalt, is a facilitating or inhibiting factor in the retention of optically presented stimuli. These

stimuli were six figures made up of lines, curves and triangles, three of which made up a pattern or Gestalt, whereas the other three did not make up a design. In learning these two groups of figures it was found that fewer repetitions were necessary for all four subjects with the G group (G = Gestalt) than for the H group (H = conglomeration). In a study of retention after eight days, it was found that there were fewer mistakes in reproduction of the G figures than of the H figures. A second study by means of the reproduction method was made at the end of the semester, and again it was found that the subjects reproduced the G figures better than the H figures. Finally a study was made using the savings method. The results were in favor of the G group. The author gives the introspections of his subjects and discusses the factors which account for this difference.—*F. J. Gaudet* (Dana).

480. **Leeper, R., & Leeper, D. O. An experimental study of equivalent stimulation in human learning.** *J. Gen. Psychol.*, 1932, 6, 344–376.—Using a pencil maze, a number maze, simple piano melodies, and rhythms, the authors carried out a group experiment on the effect of varying the stimuli during training, while the general pattern remained the same. The pencil maze was varied by printing it in slightly different sizes, and the melodies were varied by slightly changing the pitch. The results on the whole favored learning under the condition of constant stimulation, especially in the case of the number maze. The authors conclude that equivalence of stimulation is integral in the learning process, which consists in changes that function as dynamically organized neural patterns. No analysis is made of the verbal activity involved in the learning. —*H. Cason* (Wisconsin).

481. **McGeoch, J. A. The influence of degree of interpolated learning upon retroactive inhibition.** *Amer. J. Psychol.*, 1932, 44, 695–708.—The problem of the present study was to determine the influence of varying degrees of interpolated learning upon the amount of retroactive inhibition. Two experiments with nonsense syllables were performed, one by the method of anticipation and one by the method of complete presentation, and the results show that, although the method used is a determining factor, "neither very small nor very large degrees of interpolated learning . . . free original lists . . . from the disintegrating influence of interpolated acquisitions." The experiments both show also "that a relatively low degree of interpolated learning . . . produces a somewhat smaller retroaction than do relatively higher degrees of learning which are close together in the magnitude of their effects.—*D. E. Johannsen* (Skidmore).

482. **Peterson, G. M. An empirical study of the ability to generalize.** *J. Gen. Psychol.*, 1932, 6, 90–114.—A number of problems involving the law of the lever were given to primary and secondary school children with a view to discovering the trend of ability in solving them and the correlation of this ability with age, intelligence, and grade in school. It was found that the ability to solve problems involving a general principle can be measured with considerable reliability. Positive correlations were found between age, intelligence, test scores, ability to solve the lever problem, and grade in school.—*H. Cason* (Wisconsin).

483. **Rounds, G. H., Schubert, H. J. P., & Poffenberger, A. T. Effects of practice upon the metabolic cost of mental work.** *J. Gen. Psychol.*, 1932, 7, 65–79.—An investigation was made of the cost to the organism of adding columns of figures during the course of practice. The units of output were objectively standardized, the objective working conditions were kept constant, work done was measured in terms of rate or number of units completed, and cost was measured in terms of energy expended. "If the total expenditure of energy tends to remain constant during a period of mental work while the output increases and the cost per unit decreases, we may have here the metabolic equivalent of the introspectively uniform state of 'doing one's best.' That is to say, doing one's best may mean not necessarily always doing the same amount of work, but expending the same amount of energy. This is suggestive of the steady state attained in the course of severe physical work."—*H. Cason* (Wisconsin).

484. **Skaggs, E. B., Skaggs, I. S., & Jardon, M. Attention and bodily sway.** *Amer. J. Psychol.*, 1932, 44, 749–755.—The present study was made in an attempt to throw more light on the question whether individuals do better in maintaining a position when they are directed to attend to their own position or when they are directed to attend to some other problem, previous experiments having given equivocal results. O was asked to stand in a standard position, a record of movements being made on smoked paper, and the instructions were varied. In some experiments he was asked to do mental multiplication, in others to pay attention to not moving, in others to read; in some he was asked to tense the muscles in his effort to remain quiet, and in some cases he was told to attend to certain specific parts of his own body in order to maintain his position. The results show that unpractised O's usually sway less when attention is distracted from the body. Of the practiced O's, the groups are evenly divided, some swaying more with distracted attention and some less. Nearly all do better under normal muscular tension than under instructions to tense the muscles. "The suggestion is offered that varying degrees of muscular tension, associated with the direction of attention, may be an important factor in accounting for the individual differences found."—*D. E. Johannsen* (Skidmore).

485. **Stroud, J. B. Effect of complexity of material upon the form of learning curves.** *Amer. J. Psychol.*, 1932, 44, 721–731.—The material used in this experiment was a list of monosyllabic nouns. The author reaches the following conclusions: "(1) Types of learning curves obtained for ideational material depend upon complexity of the material. (a) By the method of direct recall negatively accelerated

curves were obtained for the 1-word units; S-shaped curves were obtained for the 2- and 3-word units; positively accelerated curves were obtained for the 4-word units. (b) By the method of anticipation S-shaped curves were obtained for the 1-, 2-, and 3-word units, and a positively accelerated curve was obtained for the 4-word units. (2) The inflection points on the S-shaped curves rise with increase in size of the units of response."—*D. E. Johannsen* (Skidmore).

486. **Urban, F. M. Über empirische Begriffe.** (Concerning empirical concepts.) *Arch. f. d. ges. Psychol.*, 1932, 84, 489–512.—The problem of empirical concept formation is to find a number of objects of the same kind occurring in nature apart from human agency. Similarity of objects consists in their having one or more points in common. The author proceeds with a logical analysis of the nature of the concept, and the difficulties arising from the facts that many concepts cover an almost infinite number of individual objects and that we seek to generalize concerning the entire group from observations of a limited sample. The characteristics implied in the concept and those that can be logically deduced from them obviously apply by definition to every example of the class, but each has in addition an indefinite number of other characteristics, by which it may be an example of another class. Which characteristics are regarded as essential will depend upon which class the object is regarded as representing. Every concept implies definite conditions of origin. When individuals of a given class sometimes (but not always) exhibit peculiarities not implicit in the class concept and not inevitably arising from the conditions which produce the essential characteristics, then these peculiarities are said to be accidental in the logical sense. This does not mean that they are uncaused. Measurable duration is an essential trait implicit in the concept of reaction, but the exact duration is logically accidental. Measurable length varying within fairly definite limits is an essential trait common to all infants, but the exact length of a particular infant is logically accidental (though it of course results from natural causes). The article is devoted to an abstract critique and revaluation of statistical methods on logical grounds.—*M. F. Martin* (West Springfield, Mass.).

[See also abstracts 444, 449, 604, 742.]

NERVOUS SYSTEM

487. **Coombs, H. C. Combined effects of drugs and electrical excitation of cortical motor area in cats.** *Proc. Soc. Exper. Biol. & Med.*, 1932, 30, 1–3.—Combined excitation from two different sources was found to be more destructive than a considerably greater amount of excitation from one source. When a convulsive drug is administered following convulsions resulting from electrical stimulation, the effect is fatal in most cases, while administration of the drug alone will produce from 5 to 10 convulsions before death results. When electrical stimulation follows drug administration the average number of convulsions elicited before death is 14 or 15, while when no drug was given electrical stimulation elicited from 35 to 55 convulsions before death.—*P. Seckler* (Clark).

488. **Hoagland, H. Specific afferent impulses and cutaneous sensibility.** *J. Gen. Psychol.*, 1932, 6, 276–295.—Recent literature presenting evidence for the existence of specific afferent nerve impulses is reviewed. A body of evidence exists indicating a general correlation of quantitative aspects of the action potential of afferent nerve fibers with specific sense modalities. Using a Matthews amplifier and oscillograph in conjunction with a loudspeaker, a camera, and a standing wave screen, observations of action potentials from single nerve fibers supplying receptors in the skin of the frog were made. Some individual end organs were found which respond only to light touch; others were found which respond only to the class of stimuli known as painful in man. A few were found which respond to both types of stimulation. The action potentials set up by touch are typically rapid and of larger amplitude. Those set up by painful stimuli are typically of longer duration and of smaller amplitude. Exceptions to both of these generalizations have been found. Thermal stimuli applied to frog's skin must be very intense in order to initiate nerve impulses. The frog may possess epicritic and protopathic sensitivity. The two types of sensitivities found are markedly correlated with specific nerve impulses.—*H. Cason* (Wisconsin).

489. **Ingram, W. R., & Ranson, S. W. Postural reactions in cats following destruction of both red nuclei.** *Proc. Soc. Exper. Biol. & Med.*, 1932, 29, 1089.—The authors had previously shown that direct stimulation of the red nucleus in cats by the Horsley-Clarke stereotaxic instrument gave no postural responses, although areas of the reticular formation dorsal and lateral to it gave coordinated reactions affecting limbs and trunk. Bilateral destruction of the nucleus by electrolysis with minimum damage to other tissue produced in both chronic and acute experiments preparations which could right themselves, stand, and walk in an efficient, though somewhat dysmetric, manner. The righting mechanism was also shown to be independent of visual reflexes. There was some stiffness and the balance of tonus was in favor of the extensor muscles, which was shown when, under certain conditions, there was exhibited a resistance to passive flexion in each limb (positive support reaction). In general it is concluded that while the red nucleus is important in regulating postural tonus, it is only part of a more complex system governing this function.—*M. O. Wilson* (Oklahoma).

490. **Jones, R. L. Components of the vagus nerve.** *Proc. Soc. Exper. Biol. & Med.*, 1932, 29, 1138–1141.—Cats were subjected to extirpation of the superior and inferior cervical sympathetic ganglia on the same side, the inferior first, followed by the superior after 4 to 7 days, with autopsy after 10 to 21 days. Portions of the vagi were taken at levels of 1 to 2 cm. above and below the origin of the recurrent nerve and 1 to 2 cm. below the heart. Proximal to the

nodose ganglion a greater portion of cross section was occupied with myelinated fibers, while distal to it the unmyelinated were in the majority. Serial sections through the nodose showed a gradual increase downward through the ganglion in the number of unmyelinated fibers. There was also evidence that this ganglion is the site of origin of a majority of unmyelinated fibers in the vagus trunk, since counts revealed the following number of myelinated fibers at three positions with respect to the nodose in one preparation: left vagus above nodose, 5,377; left superior laryngeal, 2,182; left vagus below nodose, 2,848. Furthermore, there was evidence that this ganglion is more than an ordinary sensory ganglion, that is, there were present some efferent as well as afferent cells.—*M. O. Wilson* (Oklahoma).

491. **Keller, A. D., & Hare, W. K. Heat regulation in medullary and mid-brain preparations.** *Proc. Soc. Exper. Biol. & Med.*, 1932, 29, 1067–1068.—The authors present evidence showing the superiority of medullary over mid-brain preparations in ability to regulate heat. "The difference between two such preparations, e.g., in their ability to maintain a rectal temperature of relatively normal range when subjected to a low environmental temperature, was readily demonstrated by preparing the animals simultaneously and then placing them in the same incubator. In this case if the box was regulated to maintain the temperature of the mid-brain animal, the medullary preparation soon died of hyperthermia; on the other hand, if the box was regulated for the medullary preparation the temperature of the mid-brain animal was markedly low."—*M. O. Wilson* (Oklahoma).

492. **Keller, A. D., & Hare, W. K. The hypothalamus and heat regulation.** *Proc. Soc. Exper. Biol. & Med.*, 1932, 29, 1169–1170.—Observations made by the authors "indicate that the chief central mechanism controlling heat production is located in the hypothalamus, and that extirpation of this region releases the heat loss mechanism, located elsewhere, from coordinated control."—*M. O. Wilson* (Oklahoma).

493. **Loo, Y. T. [A textbook of neuro-anatomy.]** Author, 1932. Pp. 244. $4.00 Mex.—This textbook of neuro-anatomy has grown from syllabi used with medical students, and is written in Chinese. The treatment is primarily anatomical, with relatively brief reference to the functional aspects. However, a special chapter is devoted to a discussion of the neurological basis of behavior. The book covers all of the important parts of the nervous system. Concerning the hypothalamus, the autonomic nervous system, the cerebral cortex, racial differences, and the comparative study of nervous systems, up-to-date experimental data are presented. A list of collateral readings and exercises follows each chapter, and twenty pages of Chinese-English and English-Chinese equivalents of neuro-anatomical terms are placed at the end of the text. There are 217 detailed diagrams.—*Chen-Fu Wu* (Nat. Res. Inst. Psychol., China).

494. **McSwiney, B. A., & Robson, J. M. The sympathetic innervation of the stomach. III. The interaction of the vagus and sympathetic nerves.** *J. Physiol.*, 1931, 73, 141–150.—The effects of dual stimulation of the vagus and periarterial nerves supplying isolated smooth muscle obtained from the fundus of the cat's stomach were investigated. It was found that stimulation of the periarterial nerves may inhibit the vagus response, and that the response of the smooth muscle to stimulation of the periarterial nerves may be reversed by stimulation of the vagus nerves. The inhibitor effect on the vagus was found to increase as the frequency or duration of periarterial stimulation was increased. This is explained on the basis of a chemical inhibitory substance released in the periphery as a result of nerve stimulation.—*L. Berkovich* (Clark).

495. **Russetzki, J. Der Einfluss von Wärme und Kälte auf das vegetative Nervensystem.** (The influence of heat and cold on the vegetative nervous system.) *Rev. neur. a psychiat.*, 1931, 195–200.—The reaction of the vegetative nervous system to local applications of heat and cold was examined in 16 persons. After a local warm bath of 30° C., there occurred an increase of temperature on the skin and in the mouth; a decrease in all varieties of dermatographia; increase of the vagus reflexes (oculocardiac and epigastric); lowering of blood pressure; and quickened pulse rate. Cold caused a decrease of skin temperature and an increase of buccal temperature; a decrease of the vagus reflexes; inhibition of the vasodilators and stimulation of the vasoconstrictors; and white dermatographia. Raised dermatographia remained unchanged, and the blood pressure and pulse showed no constant changes. Warm local irritation raised the central and lowered the peripheral and vasoconstrictor reflexes; cold decreased the central and increased the vasoconstrictor reflexes.—*M. E. Morse* (Catonsville, Md.).

496. **Squires, P. C. An interesting case of human behavior after loss of brain tissue.** *J. Gen. Psychol.*, 1932, 6, 206–209.—Report of the case of Lawrence Beasley, aged 19, who, after a severe cerebral injury, retained his mental powers to a remarkable extent; based on correspondence with the attending physician, F. O. Nichols, of Etowah, Tenn.—*H. Cason* (Wisconsin).

497. **Wachholder, K. Die allgemeinen physiologischen Grundlagen der Neurologie. IV Teil. Allgemeine Physiologie des Zentralnervensystems (Fortsetzung). II. Der Unterschied zwischen der Tätigkeitsform des zentralen und der des peripheren Nervensystems.** (The general physiological foundations of neurology. Part IV. General physiology of the central nervous system (continued). II. The differences between the form of activity of the central and that of the peripheral nervous system.) *Fortsch. Neur., Psychiat. u. Grenzgeb.*, 1932, 4, 425–453.—The activity of the central nervous system differs, or seems to differ, from that of the peripheral nervous system in the following ways: (1) It undergoes much greater metabolism. (2) It is more sus-

ceptible to fatigue. (3) It presents quantitative differences of a temporal nature in the course of the excitation process, namely (a) in a retardation of conduction, and (b) in a greater length of the refractory stage. (4) It is qualitatively different in that conduction is in only one direction. (5) Excitation conducted to the C.N.S. undergoes specific transformation, whereas conduction through peripheral nerves results in no change. (6) Its individual elements possess a functional connection, as contrasted with the isolated functioning of the peripheral nerve fibers. (7) It presents a peculiar lack of correspondence between excitability and functional capacity on the one hand and the phenomena of summation, facilitation, inhibition and drainage on the other, either (a) as a result of the interference of specific excitations of the same nerve elements, or (b) as a result of (6), i.e., through the interference of excitations of different nerve elements. (8) It presents a decided tendency to rhythmic activity, particularly of an alternating kind, i.e., reciprocal innervation. (9) It is capable of receiving metabolic stimuli and translating them into so-called automatic activity. A comprehensive bibliography is appended. —*R. B. MacLeod* (Cornell).

498. **Woollard, H. H., Roberts, J. E. H., & Carmichael, E. A. An inquiry into referred pain.** *Lancet,* 1932, 222, 337–338.—The findings of recent investigations have challenged the theory of referred pain. It is claimed that referred pain is abolished by the anesthetization of the area to which the pain is referred. The authors have investigated the validity of this claim by making observations during phrenic avulsion under novocain anesthesia. The phrenic nerve was exposed and stimulated and the area of referred pain mapped out. Anesthesia of this area does not affect the character or nature of the pain and its locality is not essentially altered. It is concluded that the pain "must be due to a reference by higher centers of activity arising in the spinal segment corresponding to the nerve stimulated." —*D. J. Ingle* (Minnesota).

[See also abstracts 429, 439, 460, 487, 511, 540, 612, 613, 660, 667, 670, 674.]

MOTOR PHENOMENA AND ACTION

499. **Ask-Upmark, E. Thyreotoxicosis and tetany.** *Endocrin.,* 1932, 16, 369–396.—Tetany is not uncommonly associated with thyreotoxicosis. There are two varieties of this combination: one in which tetany resulting from parathyroid insufficiency is the primary condition and the thyreotoxicosis possibly a compensatory reaction, and the other variety in which hyperthyroidism seems to be the primary disability and is complicated by the appearance of tetany. The cause of this second variety of tetany is not known. It is suggested that as the body is known to excrete calcium rapidly during thyreotoxicosis the body tissues may be deficient in calcium even though the calcium level of the blood stream remains normal. This deficiency would give rise to tetany. This also furnishes a possible explanation for the increased irritability of the nervous system which is present in hyperthyroidism as well as in tetany. It has been shown that the balance existing between calcium and other ions determines irritability of the nervous system. This hypothesis has as yet little to support it, for studies of the calcium content of the tissues during thyreotoxicosis have not been made.—*D. J. Ingle* (Minnesota).

500. **Blaschko, H., Cattell, McK., & Kahn, J. L. On the nature of the two types of response in the neuromuscular system of the crustacean claw.** *J. Physiol.,* 1931, 73, 25–35.—The authors carry further the previous investigations by Lucas on the two distinct types of contraction obtained from the claw muscles (adductor) of various crustaceans in response to stimulation. It is found that if, while a low frequency of stimulation is maintaining a sustained contraction in the muscle, a single stimulus of like nature is applied, the muscle will then respond by a contraction of the strong twitch-like type. This new level of response can be maintained by the initial slow frequency of stimulation. The nature of the results indicates a mechanism for enabling the organism to maintain a continuous strong tension which makes comparatively small demands on the nervous system.—*L. Berkovich* (Clark).

501. **Carmichael, L., & Cashman, H. A study of mirror-writing in relation to handedness and perceptual and motor habits.** *J. Gen. Psychol.,* 1932, 6, 296–329.—A study of seven subjects, a review of the literature, and a theoretical discussion.—*H. Cason* (Wisconsin).

502. **Cheney, R. H. Buffer influence upon response of striated muscle to caffeine stimulation in fatigue studies.** *Proc. Soc. Exper. Biol. & Med.,* 1932, 30, 3–7.—Caffeine stimulation of the gastrocnemius muscle of *Rana pipiens* in isotonic solution of constant pH of 7.3 showed a difference in effect on muscular fatigue in accordance with the nature of the buffer used to keep the medium constant. The characteristic positive effect of caffeine in delaying the rapidity of fatigue is found when administered in aqueous medium or in a bicarbonate buffered-Ringer medium. Different relative effects on the rapidity of fatigue were caused by these two media. A reversal of the usual caffeine effect upon the fatigue record is obtained when caffeine is introduced in a phosphate buffered medium.—*P. Seckler* (Clark).

503. **Dodson, J. D. The relative values of satisfying and annoying situations as motives in the learning process.** *J. Comp. Psychol.,* 1932, 14, 147–164.—Three groups of human subjects, punishment group (electric shock), reward group (candy in various amounts depending on performance, or an "A" in the course in psychology if a certain level of performance was attained), and non-reward group, were trained on a Yerkes multiple-choice apparatus and a stylus maze. The results show that punishment led to the quickest learning. The reward group made

scores intermediate between the punishment and nonreward group. Certain educational implications are pointed out.—*N. L. Munn* (Pittsburgh).

504. **Farnsworth, P. R. Musical talent and the left hand.** *School Music,* 1932, 32, 11.—Following the 1923 claims of a music teacher, Mrs. M. L. Sikes, that the left hand is unduly favored by the musically precocious, the writer ascertained by the questionnaire method the prevalence of this idea among music teachers. It was found that the Sikes observation has not been verified. Certain teachers pointed out that because of the prevalence of right-handedness the left hand should have more training than it usually receives to overcome its handicap. Ambidextrous people are undoubtedly at an advantage in piano technique. The observations of the psychiatrist C. Quinan on music and sinistrality are discussed.—*P. R. Farnsworth* (Stanford).

505. **Freeman, G. L., & Katzoff, E. T. Minor studies from the psychological laboratory of Northwestern University. I. Muscular tension and irritability.** *Amer. J. Psychol.,* 1932, 44, 789–792.—The problem of the present experiment was to study the relation between "the changes in tension of adult S's during experimentally produced irritations and to relate these changes with some objective measure of their emotional irritability in connection with situations of everyday life." The S's were 50 college students, who were told that the purpose of the experiment was to measure the changes in perspiration during reading. Records were made on a kymograph by the pressure of the hand on a bulb connected with a tambour. S read aloud six selections and one irritating stimulus was introduced in each reading. Stimuli: flickering of reading lamp, falling of a large brass weight near S's left thigh, quick removal of support of head, snapping of large mouse-trap, strong upward current of air, persistent filing and scratching on screen. After the experiment was complete, S filled in Cason's Common Annoyance Test. ρ between the score on test and tension as expressed by pressure on the bulb was .49.—*D. E. Johannsen* (Skidmore).

506. **Joll, C. A. Diseases of the thyroid gland.** London: Heineman, 1932. Pp. xviii + 682. £3. 3. 0.—This is a monumental and authoritative treatise, based almost entirely upon first-hand practice, upon diseases of the thyroid gland. A particularly detailed treatment is given of the anatomy and physiology of the thyroid gland. The distribution (in England, Scotland, and Wales), etiology, diagnosis, and treatment of primary toxic goiter, or thyrotoxicosis, are discussed at length. Many clinical pictures appear. The volume is profusely illustrated, and many carefully selected bibliographies are included.—*F. C. Bartlett* (Cambridge, England).

507. **Kopeloff, N., Upton, M. F., Raney, M. E., & Kopeloff, L. M. Typhoid agglutinins as influenced by the conditioned reflex in man.** *Proc. Soc. Exper. Biol. & Med.,* 1932, 30, 11–12.—Subcutaneous injections of typhoid vaccine following application of an ice cube to the cheek were given for 21 successive days. After a period of two weeks the conditioning stimuli, the ice cube and the prick of the needle were given. Although some effect was found in the majority of the experimental group of subjects, the authors state that from their data it is doubtful that a significant rise in typhoid agglutinins follows conditioning stimuli.—*P. Seckler* (Clark).

508. **Lacey, C. F. Effects of some basal anesthetics on vasomotor reflexes.** *Proc. Soc. Exper. Biol. & Med.,* 1932, 29, 1074–1076.—Cats were anesthetized with 90% ethylene and 10% oxygen (via tracheal cannula) so that the sciatic could be cut and a carotid cannula inserted for recording blood pressure. Doses of the barbiturates (amytal, allonal and dial), ranging (in 10% intervals) from 20% to 60–70% of M. L. D., were administered intraperitoneally. The central end of the sciatic was stimulated by 6 volts through the Dubois-Reymond coil with the secondary at 20 cm. or less. In a majority of cases the vasomotor response under doses from 30% to 60% of the M. L. D. and with current of low intensity was a fall of blood pressure. This was also frequently true for higher intensity. However, in some instances on increasing the intensity by 1 or 2 cm. the depressor response changed to a pressor one. With the largest doses (60% to 70% of the M. L. D.) the strongest possible stimulation produced no vasomotor response. In vagotomized cats vasomotor responses to sciatic stimulation were similar to those of animals with vagi intact, but the fall in pressure was much less. With corresponding percentages of M. L. D. of chloral and avertin (given rectally) and paraldehyde (given intraperitoneally) and with vagi intact there was usually an increase in pressure. In vagotomized animals with these drugs, there was invariably an increased pressure, except in cases of doses above 60% of M. L. D., in which case the strongest possible stimulation was followed by neither vasomotor nor other reflexes.—*M. O. Wilson* (Oklahoma).

509. **Lambert, J. F., & Ewert, P. H. Part I: The effect of verbal instructions upon stylus maze learning.** *J. Gen. Psychol.,* 1932, 6, 377–399.—Using a stylus maze with human subjects, increasing the instructions increased the efficiency of learning and the tendency to use the verbal method of attack.—*H. Cason* (Wisconsin).

510. **Langdon, J. N. An experimental study of certain forms of manual dexterity.** *Indus. Health Res. Board,* 1932, Rep. No. 66. 1/-.—The report gives an account of a number of tests of manual dexterity carried out on a large group of boys aged about 16 years. Careful and detailed statistical analysis suggests that there may be a common motor element entering into all the tests used. Additional tests carried out upon a similar group of girls yielded confirmatory results. It is held that the common factor involved is of central origin, though its character and the mechanism of its operation must await further research. It also appears that the measure-

ment of this common motor factor may be of considerable use in connection with vocational guidance. Here again, further work, particularly in the establishment of more satisfactory tests, is called for.—*F. C. Bartlett* (Cambridge, England).

511. **Lapicque, L. Has the muscular substance a longer chronaxy than the nervous substance?** *J. Physiol.*, 1931, 73, 189–214.—A sartorius placed directly in Ringer's solution and stimulated through the solution without any direct contact with the electrodes gives two very distinct strength-duration curves; an α stimulation, relatively slow, and a γ stimulation, relatively quick. A new experimental procedure is described for the determination of the strength duration curves. The author disagrees with the conception of a muscle substance α and a nervous one γ on the ground of his experiments. He contends that refutation of the law of nerve-muscle isochronism by previous authors is not correct due to the abnormal and artificial effect of Ringer's solution.—*M. A. Rubin* (Clark).

512. **Lapicque, L. On electric stimulation of muscle through Ringer's solution.** *J. Physiol.*, 1931, 73, 219–246.—The strength-duration curve resulting from stimulating a frog sartorius immersed in Ringer electrically through the solution is more elongated than the normal stimulation curve. This curve (called α by Keith Lucas) offers a time factor, or a pseudo-chronaxy, varying with experimental conditions. Experimentation (e.g., varying the length and thickness of the fluid sheath, specific conductivity, amount of calcium in the solution, and the effect of curare and sparteine) showed that the α curve is more influenced by the conditions of the surrounding medium than by the properties of the muscle. Electrical stimulation of a nerve bathed in Ringer gave a strength-duration curve very close to the quick curve (γ) obtained on the muscle in the same conditions, but distinctly different from the curve obtained on the same nerve stimulated in air.—*M. A. Rubin* (Clark).

513. **Lauer, A. R., & Smith, E. A. A quantitative study of the relation between pulse and breathing changes and electro-biochemical responses.** *Amer. J. Psychol.*, 1932, 44, 732–739.—The problem of the present study was to discover the relationship holding between certain physiological processes immediately after sensory excitation. Records of pulse, breathing, and electrical changes were made on a kymograph drum, both before and after a stimulation, which consisted of the sound of a hammer, a policeman's whistle, the sight of an illuminated skull, and a rifle shot. The results show that the magnitude of the electro-biochemical response is roughly proportional to the strength of the stimulus. An r of -0.2723 between the pulse rate after physical exercise and after the sensory stimulation indicates that different factors produce the change. Breathing changes correlate with the different measures of electrical change from $-.0845$ to $+.0877$, indicating that there is no correlation between breathing rate and electrical change.—*D. E. Johannsen* (Skidmore).

514. **Lorente de Nó, R. Answer to the paper "On reciprocal innervation of the eye muscles in the tonic labyrinth reflexes."** *Acta Oto-Laryngol.*, 1932, 18, 187–189.—This is a reply to a paper with the same title published in the same journal, No. 1, Vol. XVI, by de Barenne and de Kleyn. They had accused the author of stating that reciprocal innervation is lacking in tonic labyrinth reflexes. He denies this and states that he did find it, but he also found simultaneous contractions of muscles which could be considered agonists instead of antagonists. The author answers the criticisms of his technique given by de Barenne and de Kleyn and in turn criticizes theirs. He admits that they were right concerning two of his earlier curves for the inferior obliquus and superior rectus muscles, but he has recently published corrected curves which confirm their results.—*M. B. Mitchell* (George School, Pa.).

515. **Lund, F. H. The dependence of eye-hand coördinations upon eye-dominance.** *Amer. J. Psychol.*, 1932, 44, 756–762.—The problem of the present study was to determine somewhat more closely the relationship between the dominance of eye and hand, and particularly to determine how far efficiency will be impaired if the individual must use the non-dominant eye for controlling the dominant hand. The S stood at arm's length from a target with 10 crosses drawn on it, and attempted to strike the center of each cross successively with a pencil, in time to a metronome. The 247 S's were given 9 tests, 3 with both eyes open, and 3 each with the right and left eyes singly. Each S was then tested for eyedness, by means of the manoptometer. S's were grouped as right-eyed dextrals, left-eyed sinistrals, left-eyed dextrals, right-eyed sinistrals, and binocular and ambiguous. Results show that all groups are superior when using both eyes, but the dominant eye has a consistent and decided advantage in the case of the unmixed groups, when only one eye is used. The left-eyed dextrals, however, did about as well with the non-dominant as with the dominant eye, indicating that shifting "from congenital left-handedness to trained right-handedness results in greater training of the right eye . . . than might otherwise be the case." The author concludes that it is unlikely that we are definitely monocular or definitely binocular with respect to any function.—*D. E. Johannsen* (Skidmore).

516. **McGovern, B. E. Somnolence associated with pituitary cachexia.** *Endocrin.*, 1932, 16, 402–406.—A female patient, aged 23, exhibited symptoms indicating insufficiency of the anterior lobe of the pituitary gland. She showed somnolence, loss of weight, weakness, extreme fatigability, loss of memory, abdominal pain, mental depression, irritability, loss of ambition, and dryness and loss of the hair. The attacks of sleepiness occurred several times per day and were likely to come on anywhere. There was sometimes insomnia at night. She showed a general aged appearance. When treated with anterior lobe

pituitary extract given hypodermically for 4 months, she became practically free from symptoms. When the extract was withheld, she immediately lapsed into her former state, but recovered when treatment was renewed.—*D. J. Ingle* (Minnesota).

517. **Miles, W. R. Studies on physical exertion: II. Individual and group reaction time in football charging.** *Res. Quart.*, 1931, 2, 5–13.—The Miles multiple chronoscope was used to measure the reaction time of football players charging against the charging frame. It was found that "if a man is quicker than the average in lifting his finger in response to a pre-arranged signal, he probably will not be the slowest in football charging, but he may be slower than the average." A rather close agreement was found between the coaches' estimates of speed and the findings of the experimenter.—*R. Stone* (State Hospital, Marlboro, N. J.).

518. **Miles, W. R., & Graves, B. C. Studies on physical exertion: III. Effect of signal variation on football charging.** *Res. Quart.*, 1931, 2, 14–31.—The problem here was to consider: (1) the effect upon speed, uniformity and off-sides from calling signals at various rhythm rates; (2) comparison of the effects of anticipatory and non-anticipatory signals; and (3) the effect of non-rhythm upon speed, uniformity and off-sides as compared with signals given in rhythm. Miles' multiple chronoscope was used. Some of the results of the investigation are: (1) reaction to anticipatory signals is more prompt than to non-anticipatory signals; (2) off-sides are more numerous with anticipatory signals; (3) unison of play is better with anticipatory signals; (4) the rate at which signals are called makes a difference; (5) the best position for the starting signal in a series is from 2 to 5 seconds after the men have set; (6) calling digits in non-rhythm converts the ordinary anticipatory series into one producing much slower speed; (7) off-sides must apparently have a temporal displacement amounting to about 150/1000 of a second ahead of the ball, to be observed correctly by an official; (8) in anticipatory signals the players tend to start the charge at the same moment the ball starts in action; whereas in non-anticipatory signals they get away almost one-tenth of a second after the ball has moved.—*R. Stone* (State Hospital, Marlboro, N. J.).

519. **Miller, F. R. Spinal, bulbar, and decerebrate reflexes in the fore limb.** *J. Physiol.*, 1931, 73, 1–24.—The elementary reflex capacities of the fore limbs of the cat were studied, using the following preparations: (1) the spinal animal; (2) the bulbar animal; (3) the precollicular or intercollicular decerebrate animal; (4) the precollicular decerebrate animal with lateral cerebellar ablation. It was found that suitable cerebellar ablation disclosed fore-limb powers not evocable in the usual cerebellar preparation; also that the reflexes of the fore limb are essentially very similar to those of the hind limb, except that they are less extreme and are more severely depressed by spinal shock. A crossed extensor reflex may be evoked in the fore limb of the decapitate cat only after the injection of strychnine. In the majority of reflexes studied coordination is in conformity with the law of reciprocal innervation.—*L. Berkovich* (Clark).

520. **Mowrer, O. H., & Casey, W. R. A note on the relationship between nystagmus duration and thyroid condition.** *Endocrin.*, 1932, 16, 431–433.—It has been supposed that duration of post-rotation nystagmus does not normally vary in the same individual under constant conditions. It has been shown that, on the contrary, marked variations may be observed. Since this response is supposed to depend on the sensitivity of the vestibular apparatus of the inner ear, and since the amount of thyroid secretion is thought to influence nervous irritability, the variations in post-rotation nystagmus time might be caused by changes in the thyroid condition of the subject. This hypothesis was tested by feeding 7 adult pigeons 1/20 gr. of desiccated thyroid substance twice a day for 2 weeks. Although the pulse rate increased, the average post-rotation nystagmus time of the experimental group did not vary significantly from that of the controls.—*D. J. Ingle* (Minnesota).

521. **Peak, H. Intensity of stimulation and the amplitude and latency of the lid-reflex.** *Amer. J. Psychol.*, 1932, 44, 785–788.—A study of the lid-reflex in relation to the intensity of the stimulation (sudden noise), shows that "(1) the amplitude of the lid-reflex tends to increase in direct proportion to the logarithm of the stimulus intensity; (2) the increment of increase of response with increased intensity of stimulation is less under a state of relaxation than under a relatively tense state of the reactor; (3) reflex latency shows a slight decrease with increasing intensity of stimulation."—*D. E. Johannsen* (Skidmore).

522. **Russell, J. T. Relative efficiency of relaxation and tension in performing an act of skill.** *J. Gen. Psychol.*, 1932, 6, 330–343.—A study was made of tossing tennis balls at a target under three conditions of tension for the hand and arm. Results were obtained on accuracy, influence of practice, warming-up effect, effect of change from one condition to another, variability of performance, and sex differences. The following conclusions were drawn: The degree of accuracy and the degree of tension were inversely related. The initial advantage in accuracy for relaxation remained approximately constant with practice. The warming-up effect within a trial varied directly with the muscular tension. Variability was a direct function of the degree of tension. Men were more adversely affected by tension than women.—*H. Cason* (Wisconsin).

523. **Shaffer, G. W. Alertness and motor abilities of athletes and non-athletes.** *Ment. Meas. Monog.*, 1931, No. 8. Pp. 1–65.—"The purpose of this investigation has been to compare different groups in certain accepted tests of motor ability with reference to their ability to make small muscle movements and to compare these same groups in a mental factor, which for the want of a better term, we may call

alertness." Three groups were used, team athletes, individual athletes, and non-participants in any form of athletics. The following tests were used: steadiness test, tapping test, strength of grip test, endurance tests, cancellation test, an omitted letter test, a tachistoscopic test, and a general intelligence test. The general conclusions are: (1) athletes are superior to non-athletes in motor ability and alertness; (2) there is a difference in motor ability and alertness within the athletic groups, and this difference appears to be in favor of those athletes who participate in team games in contradistinction to those who take part in individual athletic feats in which there is no team element involved; (3) athletes are inferior to non-athletes in tests of arithmetic ability, precision in language, and general information.—*R. Stone* (State Hospital, Marlboro, N. J.).

524. **Winsor, A. L. The effect of cigarette smoking on secretion.** *J. Gen. Psychol.*, 1932, 6, 190–195.—A study was made of the effect of cigarette smoking on parotid secretion in smokers and non-smokers. Smoking was followed by an average decrease in the secretion of non-smokers and by an average increase in the secretion of smokers.—*H. Cason* (Wisconsin).

525. **Wolfle, H. M. Conditioning as a function of the interval between the conditioned and the original stimulus.** *J. Gen. Psychol.*, 1932, 7, 80–103.—An attempt was made to condition the sometimes voluntary withdrawal movement of the hand and arm to an auditory stimulus, the procedure being similar to that used by Watson in 1916. 25 out of 72 subjects were not conditioned; and of the remaining 47 subjects, continued practice resulted in a decrease in conditioning for 20, no constant change for 18, and an increase in conditioning for 8. Backward conditioning was found to be possible in only 6 to 12% of the cases.—*H. Cason* (Wisconsin).

[See also abstracts 437, 446, 447, 463, 465, 466, 477, 480, 483, 484, 489, 608, 622, 651, 654, 657, 669, 721, 730, 734, 771.]

PLANT AND ANIMAL BEHAVIOR

526. **Beck, G. Neue Beiträge zur Zweikomponententheorie des Hungers.** (New contributions to the two-component theory of hunger.) *Zsch. f. Psychol.*, 1930, 118, 283–349.—This work is from the Psychological Institute at Rostock. It supplements Katz's studies of the reception of food by hens and investigates especially this question: what rôles are played by illumination and distribution of food portions in time? Exact preliminary experiments determined the "spontaneous value" of reception of food by the four experimental animals after 24 hours of hunger. With reduced illumination, there was a strong dependency of food taking upon the degree of illumination. In the darkened room only the greatest hunger was clearly arrested; the animals often ate only half of the customary portions. When normal illumination was restored, they ate much more than would correspond to the spontaneous value. Then experiments with colored lights were performed. Red and yellow illumination stimulated appetite, and the hens ate more than in daylight. Green and blue light, on the contrary, inhibited the desire for food; this illumination is sensed by hens as a considerable darkening, since the reddish-yellow globules of oil in their retinae between the cones absorb blue and green light. In some experiments, the food places were illuminated with colors. The red fields were first pecked at until empty. Then, after going around the blue and green fields, the hens went to the yellow. After going around the blue field again, they sought the green field, but then usually they pecked at both simultaneously. It seems that hens sense only a difference of brightness, and not a difference of hue, between blue and green. By means of graduated illumination of the two halves of the feeding place, Beck was able to determine by the method of limits that only a gross difference of brightness in the two fields causes the hens to eat only from the brighter field. The hens' appetites were greatly stimulated when the food was placed before them continuously in small portions. On the average, they ate 20% more than usual; when a grain at a time was added through a small tube, as much as 41% more than usual. A still more striking increase in their appetites was observed when they were fed several times in the course of the day. The presence of inciting animals or stimulation by food which was at first unattainable likewise increased their desire for food. On the other hand, their appetites were greatly reduced on egg-laying days and during the moulting period.—*L. Wentscher* (Köln).

527. **Castle, E. S. Dark adaptation and the dark growth response of *Phycomyces*.** *J. Gen. Physiol.*, 1932, 16, 75–88.—Light-adapted sporangiophores of *Phycomyces* respond to sudden darkening by a temporary decrease in the rate of elongation after a latent period of several minutes. The reaction time is shorter the more intense the previous illumination. The rate of dark adaptation is found to be proportional to the logarithm of preceding intensity over a wide range. A constant amount of dark adaptation takes place before the response occurs. Possible equations descriptive of the stationary state are examined.—*C. H. Graham* (Clark).

528. **Clarke, G. L., & Wolf, E. The mechanisms of tropistic reactions and the strychnine effect in *Daphnia*.** *J. Gen. Physiol.*, 1932, 16, 99–105.—After a brief interval in a strychnine solution *Daphnia* exhibits a reversal of phototropism from negative to positive, and of galvanotropism from anodic to cathodic. Body orientation remains the same. The mechanism responsible for the sign of phototropism and galvanotropism is distinct from the underlying orientation. Evidence is presented to show that a reversal of phototropism is conditioned on the activity of the reciprocally innervated antagonistic muscles of the swimming appendages.—*C. H. Graham* (Clark).

529. **Commins, W. D. The effect of castration at various ages upon the learning ability of male albino rats.** *J. Comp. Psychol.*, 1932, 14, 29–53.—Male

white rats were castrated at the ages of 20, 50, 90, 130, and 170 days and tested on the following mazes at 6 months of age to determine the effect of castration on learning performance: Stone multiple-T maze, Stone multiple light discrimination box, a 12-unit elevated U-type maze, a multiple-T elevated maze. Retention tests were given after 50 days. The criteria of comparison were errors, and trials to meet the criterion of mastery. There was a careful control of motivation. The castrated animals did not differ significantly from normal animals on any of the tests. The author says, "The testicular hormone has no demonstrable influence upon the development of learning ability of rats from the age of twenty days to maturity. Castration at the above ages brings about no demonstrable regressive changes in the learning ability of male rats." These results are not in conformity with the previous results of Tsai, and Tuttle and Dykshorn, in which castration appeared to exert a deleterious effect on learning. Bibliography.—*N. L. Munn* (Pittsburgh).

530. **Commins, W. D., McNemar, Q., & Stone, C. P. Intercorrelations of measures of ability in the rat.** *J. Comp. Psychol.*, 1932, 14, 225–235.—Correlations between scores on the multiple light discrimination, triple platform escape and multiple-T maze problems yielded negligible coefficients, whereas intercorrelations on three mazes (Stone multiple-T, elevated U, and elevated T-mazes) were of the order of .6. The results show that ability on the maze is not the same as ability on the problem box or light discrimination problems. On the other hand, the relatively high inter-maze correlations appear to indicate a "maze learning ability." Bibliography.—*N. L. Munn* (Pittsburgh).

531. **Dorcus, R. M., & Gray, W. L. The effectiveness of food and electric shock in learning and retention by rats when applied at critical points in the maze.** *J. Comp. Psychol.*, 1932, 14, 191–218.—Food was given at the end of each correct unit of a multiple-U maze or an electric shock was given in each incorrect unit. 42 rats were used. The results may be summarized as follows: "On the retention tests, the shock group made fewer errors and retained the maze-pattern better than did the food group . . . the animals which received electric shock while running the maze eliminated errors more quickly and more efficiently than did the animals which received food at the successive points in the maze. Not only is the shock more effective in the reduction of errors than is the food eaten, but it appears that a relatively smaller number of shocks received is much more effective than food eaten a greater number of times." Bibliography.—*N. L. Munn* (Pittsburgh).

532. **Erhardt, A. Ein Beitrag zu den Helligkeitsreaktionen von Planaria lugubris O. Schm.** (A contribution on the brightness reactions of *Planaria lugubris* O. Schm.) *Biol. Zentbl.*, 1932, 52, 321–329.—Colored backgrounds were provided by Hering papers. The planaria congregated on colors in preference to white and on black in preference to colors, the choice being determined by brightness. Experiments were also performed with red, green, and blue filters. No color discrimination is hypothecated.—*E. R. Hilgard* (Yale).

533. **Evans, S. An experiment in maze learning with ants.** *J. Comp. Psychol.*, 1932, 14, 183–190.—300 ants were placed in a box from the end of which led two paths, one to a food box and the other to a blind end. Before food was placed in the food box, there was no preference for either route. After 20 days with the food in the box, all of the ants took the route leading to food. When a section of the runway leading to food was reversed, there was no change in the behavior.—*N. L. Munn* (Pittsburgh).

534. **Fields, P. E. Concerning the discrimination of geometrical figures by white rats.** *J. Comp. Psychol.*, 1932, 14, 63–77.—It is alleged that Munn has committed many errors of fact and of interpretation in an early criticism of Fields' positive results on figure discrimination in the white rat. In conclusion the author says, "Inasmuch as Munn has recently obtained positive form discrimination with one rat on the jumping apparatus, he has invalidated much of his earlier work, including his criticisms of my studies. . . . With the present general acceptance of the fact that the white rat can visually discriminate between certain geometrical figures, we are free to continue our investigation of problems in which the solution is based directly upon visual stimulation."—*N. L. Munn* (Pittsburgh).

535. **Friedmann, H. On the supposed visual function of the nictitating membrane in the domestic pigeon.** *J. Comp. Psychol.*, 1932, 14, 55–61.—A series of experiments, suggested by the idea of Dunlap and Mowrer that the nictitating membrane may serve temporarily to blind the pigeon during its quick head movements and thus perform a visual function, showed that the nictitating membrane need not serve a visual function. The author says, "It appears that nictitation is primarily a type of reflex protection to the eye during jerky movements and that its visual shutter function, if existent, is only a secondary coincidence." The experiments involved surgical interference with the nictitating membrane. Such interference did not modify the jerky head movements. Blind birds used their nictitating membranes like normal animals.—*N. L. Munn* (Pittsburgh).

536. **Furbay, J. H. The swarming of ants.** *Science*, 1932, 76, 367.—A description of mating flights of *Tapinoma humilis* on Sept. 4, 1932, at Taylor University and the surrounding country.—*R. R. Willoughby* (Clark).

537. **Hahnert, W. F. A quantitative study of the reactions to electricity in *Amoeba proteus*.** *Physiol. Zool.*, 1932, 5, 491–526.—The response of an ameba to constant galvanic current is due to local decrease in the strength of the plasmagel on the cathodal side. The relation between the current density (i) and duration (t) is more nearly in accordance with the formula $i\sqrt{t} - (xi) = K$ than with Nernst's formula. Sudden increase of current density when the animal is moving toward the cathode gives an increased

rate of movement in the anterior end and a decreased rate in the posterior end, resulting in contraction of the animal. The effect gradually disappears. Strong current gives contraction, followed by the disintegration of the animal, beginning at the anodal end. Prolonged constant weak current produces increased movement, which persists for several minutes. Animals moving toward the anode respond to sudden increase in current by reversal of direction of protoplasmic flow in the cathodal end, which is followed in about a second by cessation of flow at the anodal end. The effects are momentary with weak current density and the locomotion continues again in the original direction. With strong current density both persist and the direction of locomotion is reversed. Both decreased temperature and previous stimulation cause increased reaction time, which may be due to increased viscosity of the cytoplasm.—*O. W. Richards* (Yale).

538. **Harlow, H. F. Comparative behavior of primates. III. Complicated delayed reaction tests on primates.** *J. Comp. Psychol.*, 1932, 14, 241–252.—The following complications were introduced into the delayed reaction tests used in the preceding investigations: (1) disorientation and distraction during delay; (2) presentation of two delayed reaction problems concurrently; (3) shifting of containers (within the animal's view) during the delay period. The distraction tests showed that the animals were not depending upon gross bodily orientation during the period of delay and that "Hunter's 'kinaesthetic sensory ideas' would be the simplest possible explanation of their behavior." Some of the old-world monkeys solved two delayed reaction tests concurrently. Lemurs and South American monkeys (platyrrhine) did not solve the double delayed reaction problems. A gibbon gave a poorer record than the best of the macaques and baboons. The baboons gave the best performances. Bibliography.—*N. L. Munn* (Pittsburgh).

539. **Hertz, M. Neue Versuche über das Gedächtnis der Honigbiene für Strukturen.** (New experiments on the memory of honeybees for structures.) *Biol. Zentbl.*, 1932, 52, 436–444.—Bees were trained to discriminate one box the front of which was half white and half gray from another on which the white and gray halves were transposed. After this training, boxes half gray and half black were substituted, and they had a high degree of success in choosing the correct box on the basis of their previous training with the white and gray. The bee's reaction to field structure is discussed in relation to association and Gestalt psychology.—*E. R. Hilgard* (Yale).

540. **Ingebritsen, O. C. Maze learning after lesion in the cervical cord.** *J. Comp. Psychol.*, 1932, 14, 279–294.—12 normal animals and 11 animals with cervical lesions of various kinds were trained on Lashley's 8-cul-de-sac maze until they made 10 errorless runs in succession. There was no significant difference between the trials required by operated and normal animals. The normal animals made more errors than the operated animals, but consumed less time. There was no correlation between the type or extent of lesion and the efficiency of maze performance. The lesions involved the dorsal funiculus for the most part, although some animals also had lesions in the right or left lateral funiculus.—*N. L. Munn* (Pittsburgh).

541. **Krechevsky, I. Antagonistic visual discrimination habits in the white rat.** *J. Comp. Psychol.*, 1932, 14, 263–277.—"Ten albino rats were trained in a multiple-unit discrimination box on a series of twenty antagonistic visual habits, each opposite habit being presented to the animal immediately after mastering the previous one." There was a gradual decrease in the trials and errors as a function of the number of reversals. These results are opposed to those found by Fritz. Bibliography.—*N. L. Munn* (Pittsburgh).

542. **Kuo, Z. Y. Ontogeny of embryonic behavior in aves. IV. The influence of embryonic movements upon the behavior after hatching.** *J. Comp. Psychol.*, 1932, 14, 109–122.—The author finds that many forms of behavior which appear at birth have their origin in prenatal movements of the embryo. He therefore concludes that "*the development of behavior is an absolutely gradual and continuous process.* In this continuous stream of behavioral development we can not pick up at a certain period one bit of response and assign to it the name of instinct and take another bit and call it a habit." The author claims that animal and human psychology should study behavior from the developmental angle and spend less time on "maze and puzzle box experiments, with counting the number of errors, with juggling with statistical figures to reveal the degree of the God-endowed intelligence in the albino rat, and with attempts to determine whether or not a given act can be performed without learning." Bibliography of 32 titles.—*N. L. Munn* (Pittsburgh).

543. **Lin, K. H., Tsai, C., & Wan, S. Oestrous rhythm of vegetarian and omnivorous rats.** *Chinese J. Physiol.*, 1932, 6, 23–34.—The oestrous rhythms of 61 rats on two omnivorous diets and 85 rats on three vegetarian diets were studied. The distribution of the oestrous cycle was classified according to (1) length of each cycle, and (2) average length of the cycle of each rat. The first method, which had been used by Long and Evans, appeared not to be appropriate to the present problem, and the conclusions were drawn from the results obtained with the second method. The mean duration of oestrous cycle for rats on the omnivorous diets 1A and DI were found to be 4.1 and 3.9 days respectively. The means for rats on the vegetarian diets 41A, 2A, and 3A were 4.1, 4.8, and 7.6 days respectively. The authors conclude that the oestrous cycle is not affected by mild nutritional deficiency (diets 1A and 2A, and DI and 41A), but is lengthened when the diet is very poor (diet 3A). The effect of the poor vegetarian diet is to prolong the dioestrous intervals in the oestrous cycle. The cornified cell stage is not affected. There are 7 tables, including the one on percentage compo-

sition of diets.—*Chen-Fu Wu* (Nat. Res. Inst. Psychol., China).

544. **Maslow, A. H., & Harlow, H. F. Comparative behavior of primates. II. Delayed reaction tests on primates at Bronx Park Zoo.** *J. Comp. Psychol.*, 1932, 14, 97–107.—Tests were carried out on 18 primates, using the direct method involved in the authors' previous studies. The results showed "increased capacity in order from the lemur, platyrrhine monkeys, catarrhine monkeys to the baboons. Attention is especially called to the clear superiority of the latter, since they have often been thought inferior. There was found in these tests a consistent performance characteristic of the groups. Some indications of age differences in primate capacity for delay are cited." Bibliography.—*N. L. Munn* (Pittsburgh).

545. **McNemar, Q., & Stone, C. P. Sex differences in rats on three learning tasks.** *J. Comp. Psychol.*, 1932, 14, 171–180.—The multiple-T and Carr mazes and two triple platform escape boxes were used. There was a statistically unreliable but fairly consistent difference in favor of better male performance. The females were more variable than the males. The authors conclude that the sex differences found by them and by previous investigators in learning "are large enough to be significant as disturbers in scientifically controlled experimentation, although not sufficiently large, as a rule, to warrant any conclusion regarding the presence or absence of a true sex difference in the learning of white rats." Bibliography.—*N. L. Munn* (Pittsburgh).

546. **Navez, A. E., & Robinson, T. W. Geotropic curvature of *Avena* coleoptiles.** *J. Gen. Physiol.*, 1932, 16, 133–145.—The geotropic curvature of *Avena* was studied by means of a photographic technique. On the basis of measurement in terms of methods described it is shown that the curvature is due to an increase in the elongation of the lower side of the horizontally placed coleoptile with a concomitant decrease of the rate of elongation of the upper side. This is correlated with a shift in distribution of "growth substance" in the tip as affected by change of position of the coleoptile.—*C. H. Graham* (Clark).

547. **Peterson, G. M. The influence of ligating one of the common carotid arteries upon handedness in the rat.** *J. Comp. Psychol.*, 1932, 14, 1–7.—It has been asserted that unequal blood supply to the two hemispheres of the brain, due to the different origins of the two carotid arteries, determines handedness. The author's results with the rat are not in agreement with this assertion. Ligation of the right or left carotid artery at an early age had no effect upon handedness. Of 9 animals with a ligation of the left artery, 4 were left-handed when tested in a later period of life, 3 were right-handed, and 2 tended toward ambidexterity. Of 9 animals with a ligation of the right artery, 2 were right-handed, 6 were left-handed, and one was ambidextrous. The author says, therefore, that "the explanation of cerebral dominance in man in terms of differences in the mode of origin of the two carotids should be regarded skeptically."—*N. L. Munn* (Pittsburgh).

548. **Pomerat, C. M. Mating behavior in the Japanese beetle, *Popillia japonica* Newm.** *J. Gen. Psychol.*, 1932, 7, 16–33.—A series of measurements were made on a fairly common and markedly aggressive introduced coleopteran in trying to gain sufficient data to arrive at an appreciation of the character of mate selection in a representative insect. Eight linear measurements on mated animals were obtained. A mean homogamy value for direct size of .044 ± .06 and a mean value for form of .034 ± .06 were obtained. The degree of homogamy is not so uniform in invertebrates as earlier studies appeared to indicate. No single measure can be relied upon to yield a representative index for the degree of homogamy present.—*H. Cason* (Wisconsin).

549. **Russell, E. S., & Bull, H. O. A selected bibliography of fish behavior.** *J. du conseil int. pour l'exploration de la mer*, 1932, 7, 255–283.—*W. S. Hunter* (Clark).

550. **Sanborn, H. C. Observations of apparently unlearned behavior.** *J. Comp. Psychol.*, 1932, 14, 79–95.—The author reports anecdotal material on apparently unlearned behavior of birds, dogs, and other animals. He hopes that this anecdotal material may stimulate research on the forms of behavior described.—*N. L. Munn* (Pittsburgh).

551. **Schwidetsky, G. Do you speak chimpanzee?** London: Routledge, 1932. 6/.—(See VI: 2748.)—*R. R. Willoughby* (Clark).

552. **Skinner, B. F. Drive and reflex strength.** *J. Gen. Psychol.*, 1932, 6, 22–37.—The term hunger is used to describe the presence or absence of certain characteristic behavior. The problem in the study of hunger is to account for the appearance of either case at a given time. Whether or not a rat eats is not an adequate experimental measure because it neglects the matter of degree of hunger. In the present study the rate at which a rat eats was assumed to be a measure of the degree of hunger.—*H. Cason* (Wisconsin).

553. **Skinner, B. F. Drive and reflex strength: II.** *J. Gen. Psychol.*, 1932, 6, 38–48.—A procedure which had been previously employed was modified so that the rat obtained uniform pieces of food in operating a repeating problem box. The rate of change of the rate of eating was independent of the nature of the particular reflex with which the eating behavior began.—*H. Cason* (Wisconsin).

554. **Spence, K. W. The order of eliminating blinds in maze learning by the rat.** *J. Comp. Psychol.*, 1932, 14, 9–27.—The author finds that where mazes are constructed of uniform units (T-maze, U-maze, and Y-maze) there tends to be a backward order of blind alley elimination. Analysis of the data from several maze studies showed that the blinds near the end were eliminated first, those in the center next in order and those at the beginning last in order. The results are in support of Hull's goal

gradient hypothesis. The author finds that there are, beside the backward order of elimination, two other important factors in maze learning. These are "an absolute direction orientation on the part of the animal to the goal and a tendency to anticipate, particularly the goal reaction." When these factors are considered it is possible fairly accurately to predict the order of difficulty of blind alleys in a maze. Bibliography.—*N. L. Munn* (Pittsburgh).

555. **Stavsky, W. H. The geotropic conduct of young kittens.** *J. Gen. Psychol.*, 1932, 6, 441–446.—Young kittens placed horizontally on an inclined plane orient upward at an angle θ, which is definitely a function of the slope of the plane α. When α is 37° or above θ can be expressed as a function of log sin α. Cos θ plotted against sin α shows a straight line relationship. The geo-negative range for these kittens was found to lie between 37° and 65°, a usable range smaller than that found with other young mammals. As in the case of other forms the probable error of θ, expressed as a percentage of the mean θ, decreases rectilinearly as log sin α increases.—*H. Cason* (Wisconsin).

556. **Stockdale, L. G. Technique for marking rats numerically with dye.** *J. Comp. Psychol.*, 1932, 14, 237–240.—*N. L. Munn* (Pittsburgh).

557. **Upton, M., & Stavsky, W. H. The geotropic conduct of adult rats.** *J. Gen. Psychol.*, 1932, 6, 8–21.—The random behavior of untrained adult white rats on an inclined surface affords no information on the problem of orientation in a gravitational field; but the behavior of animals trained to ascend a narrow path at various angles of inclination, when tested on an inclined surface, obeys the same general laws established for the behavior of young rats and guinea pigs. Orientation in a gravitational field is not the result of a conditioned response. Training seems to make the animals negatively geotropic, and becomes the determining factor in the specific behavior on an inclined surface.—*H. Cason* (Wisconsin).

558. **Warden, C. J. Motivation and maze learning: a reply to Professor Tolman.** *J. Gen. Psychol.*, 1932, 6, 214–216.—*H. Cason* (Wisconsin).

559. **Warner, L. H. The sensitivity of fishes to sound and to other mechanical stimulation.** *Quar. Rev. Biol.*, 1932, 7, 326–339.—The discussion treats of the following topics: tactual stimulation, water streams as stimuli, low frequency vibration, sound, learning method, receptors, hydrostatic pressure, and physiological methods. Few of the many species of fish have been studied. Sensitivity to light touch seems to be well developed, so that discrimination between gentle stroking and scratching has been demonstrated. Some fish are not sensitive to more intense stimulation, such as prodding. The lateral line mediates sensation of water currents, but the degree of sensitivity has not been ascertained. No experimental evidence has been obtained as to the effect of hydrostatic pressure. Some fish are deaf, and the sound discrimination of other fish varies greatly. Fish are more sensitive to low frequency vibrations just below the frequencies called sound.—*O. W. Richards* (Yale).

560. **Wever, E. G. Water temperature as an incentive to swimming activity in the rat.** *J. Comp. Psychol.*, 1932, 14, 219–224.—The strength of the drive was measured in terms of the time taken by the rat to swim to the end of a tank of water and climb upon a platform. The results demonstrate that "The rat's incentive to escape from immersion varies with the water temperature, being greatest for low temperatures and least at values near body temperature; high temperatures produce considerable stimulation, but apparently of a disorienting character, resulting in a relatively inadequate performance. Low temperatures (20° C. approximately) provide a comparatively constant and reliable incentive and are therefore recommended for use in water-maze studies."—*N. L. Munn* (Pittsburgh).

[See also abstracts 410, 450, 477, 487, 489, 630, 632.]

EVOLUTION AND HEREDITY

561. **Fischer, M. Die Vererbung der Geisteskrankheiten.** (The inheritance of mental diseases.) Berlin: Metzner, 1931. Pp. 24.—(Bibliographia Eugenica).

562. **Fortuyn, A. B. D. Modern research on human twins.** *Quar. Rev. Biol.*, 1932, 7, 298–306.—A discussion of the means of identifying fraternal and identical twins and the study of criteria for differentiating the effects of heredity and environment in the study of twins. The use of these criteria is illustrated.—*O. W. Richards* (Yale).

563. **Humm, D. G. Mental disorders in siblings.** Los Angeles: Univ. Southern California, Dept. of Psychology, 1932. Pp. 45.—This publication is a doctor's dissertation on a study of mental disorders in siblings of mentally diseased or socially maladjusted persons, and is concerned chiefly with the problem of causation. Material on 225 propositi with 858 living siblings was collected, with additional material obtained from Rosanoff on 214 pairs of twins, of which 76 pairs were considered monozygotic. Analyses of the data suggest that the closer the degree of genetic relationship the greater the tendency to mental disorder; in monozygotic twins the incidence was 93.5%, in opposite sex twins 24.3% were both affected, while in ordinary siblings the ratio was only 17.1%. Incidence in siblings of the same sex was found to be higher than in the case of those of opposite sex. Male incidence of disorders was higher in general, though in specific disorders there was occasionally higher female incidence. Dissimilarity of mental disorders was frequent in the same family. A 53-item bibliography is appended.—*M. H. Erickson* (Worcester State Hospital).

564. **Lassen, M.-T. Zur Frage der Vererbung "sozialer und sittlicher Charakteranlagen"—auf Grund von Fragebögen über Zwillinge.** (On the question of the inheritance of social and ethical character tendencies—based on a questionnaire on twins.)

Arch. f. Rassen- u. Gesellsch.-biol., 1931, 25, 268–278.—(Bibliographia Eugenica).

565. **Looft, C. L'évolution de l'intelligence des jumeaux.** (The development of the intelligence of twins.) *Acta pediat.*, 1931, 12, 41–74.—(Bibliographia Eugenica).

566. **Pearson, K. On the inheritance of mental disease.** *Ann. Eugenics*, 1931, 4, 362–380.—(Bibliographia Eugenica).

567. **Sallume, X., & Notestein, F. W. Trends in the size of families completed prior to 1910 in various social classes.** *Amer. J. Sociol.*, 1932, 38, 398–408.—A unique approach to the study of trends in fertility prior to 1910 for certain social classes of selected native-white populations is made possible by a special tabulation of samples of the 1910 census data relating to the number of children born to each married woman, the wife's age, and the husband's occupation. These data permit one to obtain the number of children ever born per 100 wives of specific age groups, for married women whose ages in 1910 ranged from 45 to 85 years. The trend in such cumulative birth rates can be said to measure secular changes in fertility only on the assumption that there is no correlation between fertility and the length of life after the end of the child-bearing period. Evidence on the subject is fragmentary, but it is unlikely that the trends observed could be accounted for by such an association, if it exists, and probable that they reflect actual secular changes in fertility. Analysis of the data leads to the following conclusions: (1) In each social class considered the size of completed families was declining throughout the entire period covered by this study, which is from 1885 to 1910, for the professional, business and skilled-worker classes of the urban population, and from 1870 to 1910 for the farm-owner class. (2) These changes in the size of completed families must reflect the falling annual birth rates of a still earlier period. (3) Fertility appears to have declined more rapidly in each urban class than among the wives of farm owners, and somewhat more rapidly among the "upper" urban classes than in the "lower." (4) These differences in the rate of decline have brought about increased differences in the fertility of the social classes considered.—(Courtesy *Amer. J. Sociol.*).

568. **Spengler, J. J. Fertility in Providence, Rhode Island, 1856–1929.** *Amer. J. Sociol.*, 1932, 38, 377–397.—Study of urban differential fertility is best afforded by the birth registration records of Providence, Rhode Island, where birth statistics have been accumulated with greater completeness and for a longer period than elsewhere in the United States. "Special birth-rates" for each immigrant group reveal that: maternity frequency has until recently always been greater among the various foreign-born than among the native-born women; it has been higher among the new than among the old immigrant stocks; usually, although not always, declining rate of immigration of a group is followed by decline in maternity frequency; fertility of the native and various immigrant groups has declined. Greater fertility among foreign-born is attributable to differences in age and marital composition and to greater control over fertility by natives. Decline in family size since the Civil War may in part be explained for foreign, but not for native, families by change in age composition. Since 1920 the foreign average has been declining more rapidly than the native, and the spread between the two is narrowing. Fertility among native and foreign groups in Providence is comparable with that observed elsewhere. There are few data on net fertility. Among immigrants a high infant death-rate somewhat offsets the high birth-rate. In 1920 there were, among natives, 35% less children than replacement needs.—(Courtesy *Amer. J. Sociol.*).

569. **Vervaeck, L. La stérilisation des anormaux.** (The sterilization of abnormals.) *J. de neur. et de psychiat.*, 1932, 32, 170–193.—The author objects to legal sterilization of abnormal individuals and dangerous criminals on the grounds that it seriously infringes on personal liberty, is open to grave mistakes, and transgresses certain moral principles. Sterilization may have various objects: (1) A therapeutic aim to improve mental or nervous disorders or correct sexual deviations; in the opinion of the author the results in these cases have been negligible. (2) Prophylactic purposes to prevent the recurrence or aggravation of some disease during pregnancy; this does not apply specifically to degenerates, but is a purely medical question which needs individual consideration in each case. (3) As a social measure in order to render individuals with aggressive sexual tendencies harmless to society; there has been little success in these cases. (4) Eugenic sterilization, in order to prevent the transmission of mental deficiency to the descendants; this is unjustified, as the laws of heredity are not sufficiently known at present to state with certainty whether the abnormal condition is of hereditary origin or caused by blastotoxic influences, by obstetrical traumatisms, or by early infections or other diseases. (5) The neo-Malthusian sterilization for the prevention of pregnancy is motivated by egotism or immorality, and is to be condemned.—*H. Sys* (New York City).

[See also abstract 634.]

SPECIAL MENTAL CONDITIONS

570. **Baumgarten, F. Schriften zur Charakterologie.** (Writings on characterology.) *Zsch. f. angew. Psychol.*, 1932, 41, 510–517.—A summary of six recent books on characterology by four different authors. (1) Allers, by pointing out the parallels between the new psychiatric science and the writings of early church fathers, may aid the clergy and their fellow believers to accept the modern teachings. (2) Jung's *Psychological Types* first appeared in 1921. His introvert and extrovert types are now known to every psychiatrist, and vocational psychologists have taken special interest in them. Baumgarten expresses regret that Jung has ignored the work of other investigators who have extended the applica-

tions of his theory. (3) Bovens attempts to present characterology as a science. He views human life as a struggle between the human being and his environment. His presentation is purely biological and utilitarian. He claims that the distinction between mind and body lies not in nature but in the viewpoint. As a method he favors thorough investigation of individuals rather than the lumping of statistics. He has no new theories but gives a good critical estimate of previous work and of the status of the science. (4) Künkel's point of departure is the polarity of subject and object. For him character study is a study of limits. He asks not whether a man is honorable, but to what point a man's honor extends; he asks not whether a man is talented, but what is the limit of his talent. These limits are either biological conditions or results of training. Training should aim to make individuals think in terms of "we" instead of "I." Künkel is a good observer of reality, and he is not content with presenting facts and formulating theories; he wishes to cure and to reform. His books are vitiated, however, by the coining of many new words and set phrases, and by dogmatic rejection of experimental results of certain other investigators.—*M. F. Martin* (West Springfield, Mass.).

571. **Bernfeld, S. Der Begriff der "Deutung" in der Psychoanalyse.** (The concept of "interpretation" in psychoanalysis.) *Zsch. f. angew. Psychol.*, 1932, 42, 448–497.—The author claims that the word "interpretation" according to Freud's usage has no accurate connotation. He uses it without a therapeutic value. To most authors it contains a sex significance. He discusses functional significance in psychoanalysis. Freud's interpretations are in large measure foreseen. He does not clearly find what is revealed, so they are pseudo-teleological. He characterizes psychoanalysis as reconstruction of past personal experiences out of their left-over traces, and sees great uncertainty in the conclusions reached.—*A. B. Herrig* (Michigan Central State Teachers College).

572. **Biggam, A. G., Arafa, M. A., & Ragab, A. F. Heroin addiction in Egypt.** *Lancet*, 1932, 222, 922–927.—It is estimated that there are at least one-half million addicts in Egypt, where the total population is 14 millions. Heroin is the most frequently used drug. The authors have made a detailed study of a group of 120 heroin addicts and report data indicating age and occupation, daily dose of drug, period of addiction, addiction to other drugs before heroin, and cause of addiction. The withdrawal symptoms listed in order of frequency and severity were: (1) sleeplessness and excitement; (2) general weakness and pains in the muscles, especially around the knee-joint; (3) sneezing, yawning, and lacrymation; (4) headache; (5) colic, diarrhoea, nausea, and vomiting; (6) numbness and tingling in the extremities; (7) general depression, exhaustion, and irritability; (8) loss of appetite. It was found that these withdrawal symptoms could be considerably alleviated by giving such sedative drugs as morphia, luminal, intramuscular magnesium sulphate, and paraldehyde. The amount of these drugs given was gradually reduced so that the patient finished all drug treatment by the end of seven days. Other so-called cures were investigated and found to be without permanent benefit.—*D. J. Ingle* (Minnesota).

573. **Brandes, V. Suggestion und Hypnose in ihrer Bedeutung für die menschliche Gesellschaft, für das Verständnis unter den Völkern, für die Sicherung des Friedens; mit ausführlicher Anleitung zur Erlernung leichter und tiefer Hypnosen für Aerzte und die Jugend.** (Suggestion and hypnosis in their significance for human society, for understanding among peoples, for the safeguarding of peace; with complete directions for learning light and deep hypnotic technique, for physicians and youth.) Hannover: Schrader, 1932. Pp. 90.—*R. R. Willoughby* (Clark).

574. **Earp, J. R. The student who smokes.** (2nd ed.) Yellow Springs, Ohio: Antioch Press, 1926. Pp. 61. $1.00.—This is a statistical investigation of 353 men students at Antioch College. A questionnaire regarding the extent and type of smoking was sent to each student. Data from intramural and interscholastic meets as regards the winning of first, second and third places were compared with the amount of smoking done by the athletes involved. Comparisons of the smoking habit with physiological functions, intelligence, and scholarship were made. There is a short discussion of the theories about scholarship and the smoking habit. A chapter is appended devoted to a discussion of the meaning of the probable error. The author concludes: (1) that there is a tendency for non-smokers to surpass smokers in athletic achievement; (2) that there is an indisputable association between the smoking habit and inferior scholarship, and that smokers who inhale have lower scholarship than those who do not; (3) that the decision to smoke is taken without any appeal to reason in most cases; (4) that the habits of the father influence the habits of the son as regards smoking.—*R. Stone* (State Hospital, Marlboro, N. J.).

575. **Emerson, H. [Ed.] Alcohol and man.** New York: Macmillan, 1932. Pp. 451. $3.50.—This symposium is divided into 6 parts and contains a total of 17 articles by a total of 23 contributors in medical and associated sciences. Its purpose is to supply the public with the basic factual material about alcohol. Part I deals particularly with physiological and pharmacological effects of alcohol. Part II discusses the effects of alcohol upon the cell and in heredity. The toxicological and therapeutic aspects are elaborated in the third part. Part IV is devoted to the effects of alcohol upon body resistance and the pathology of alcoholic states. Psychological, psychiatric, and criminological aspects are elaborated in Part V. *Alcohol and Longevity, Mortality, and Morbidity* is the title of the last part, which is chiefly statistical, with a review of the literature on alcohol as a community health problem. A separate bibliography is attached to the majority of the article. A glossary and subject and author indexes are ap-

pended.—*M. H. Erickson* (Worcester State Hospital).

576. **Eriksen, R. Faser og kriser i personlighetens utvikling.** (Phases and crises in the development of personality.) Oslo: Aschehoug, 1932. Pp. 210.—The aim of the author is to try (taking into account modern psychological methods and results) to give an exposition of the main phases and crises in the general ontogenetic development of human beings. The various chapter headings are: *Children and Adults, Milieu and Native Ability, The Origin of the Human Being, Developmental Phases, Laws of Development, Drives in Early Childhood, The Child of School Age and Adolescence, The Ego-Crisis and Adolescence, Disharmonies in Development.* Some selected bibliographical references are given.—*M. L. Reymert* (Mooseheart Laboratory for Child Research.)

577. **Feldmann, S. Ueber das "Auslachen."** (On "derision.") *Zentbl. f. Psychotherap.*, 1932, 5, 534–539.—The writer presents briefly a psychoanalytic interpretation of derision. The dynamic mechanism involved in laughing at some one else's social error cannot be traced entirely to a feeling of superiority. In laughing at carelessness in dress, for example, we may through identification satisfy exhibitionistic tendencies in the id, and at the same time the ego can make its innocence credible to the super-ego. In other words, there is pleasure without guilt. Other examples are considered.—*C. W. Fox* (Rochester).

578. **Feldmann, S. Traum und Krankheit.** (Dream and disease.) *Ber. VI allg. ärztl. Kong. Psychotherap.*, 1931, 210–215.—Dreams are capable of registering not merely endopsychic but also "endoorganic" processes. They give advance notice of diseased conditions, and should therefore be considered as of diagnostic value. Three types of "diagnostic" dream are described.—*R. B. MacLeod* (Cornell).

579. **Fraser-Harris, D. F. A psycho-physiological explanation of the so-called human "aura."** *Brit. J. Med. Psychol.*, 1932, 12, 174–184.—The aura is the technical term of the occultists for an emanation from the living body of something which is not of the nature of ordinary matter. Experiments done under the conditions described as necessary for perceiving the aura show the auras to be accounted for on the basis of known facts regarding negative after-images.—*E. R. Hilgard* (Yale).

580. **Glover, E. Common problems in psychoanalysis and anthropology: drug ritual and addiction.** *Brit. J. Med. Psychol.*, 1932, 12, 109–131.—Evidence from primitive drug rituals shows the processes of introjection and projection operating as they do in early infancy. Psychoanalysis makes certain exacting demands on anthropology, not realized in most anthropological literature. Nine questions raised by Evans-Pritchard are discussed at the end of the paper.—*E. R. Hilgard* (Yale).

581. **Götz, B. Ein Sohnesopfer.** (Sacrifice of a son.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 138, 320–331.—A discussion of a case in which a father killed his son as a sacrifice (cf. Abraham and Isaac).—*C. W. Fox* (Rochester).

582. **Hanna, J. V. Constant errors in the attempted measurement of introversion.** *J. Gen. Psychol.*, 1932, 7, 205–211.—53 students were given the Colgate Personal Inventory C2 at intervals of one year, and 36 students were given the same test at intervals of three weeks. The reliability correlations were .59 and .75.—*H. Cason* (Wisconsin).

583. **Hope, C. Appendix. Report of some sittings with Valiantine and Phoenix in 1927.** *Proc. Soc. Psych. Res.*, 1932, 40, 411–427.—The observer found no proof for and much evidence against the genuineness of the phenomena.—*W. S. Taylor* (Smith).

584. **Jackson, J. A., & Salisbury, H. M. Outwitting our nerves.** New York, London: Century, 1932. Pp. xi + 420. $2.50.—"A primer of psychotherapy." The opening chapter on *Nerves* shows that a nervous disorder is a psychic, not a physical disease. Freudian principles are followed in presenting causes, interpretations, and explanations of possible means of cure through reeducation (1) with subconscious exploration, (2) without subconscious exploration. There are chapters on *That Tired Feeling*, insomnia, diet, constipation, woman's ills, birth control, *Feeling Our Feelings, Choosing Our Emotions*, and sublimation. "In woman the dominant force is the nurturing instinct. . . . The twentieth century is demonstrating to us conclusively that as a career opens up full vent for the nurturing instinct, a woman is provided with a satisfactory substitute in sublimation." Glossary, list of books for further reading, and index. This is a second edition, with some additions, to the book by the same authors under the same title in 1921.—*A. G. Reynolds* (Winchester, Mass.).

585. **Karstens, E. Den psykoanalytiske Metode.** (The psychoanalytic method.) Copenhagen, Oslo: Jespersen og Pios Forlag, 1931. Pp. 168. Kr. 4.50.—The writer lays particular stress upon his instinct theory, which differs little from Freud's. He distinguishes instincts of isolation, nourishment, and sex, and traces these back to the ameba. Neuroses can be understood only from the interweaving of all three instincts.—*C. W. Fox* (Rochester).

586. **Keller, H. Neuerscheinungen über Schlaf und Traum.** (Recent publications on sleep and dream.) *Zsch. f. angew. Psychol.*, 1932, 41, 517–518.—The author summarizes three articles: *Zur Frage der Traumsymbolik* (On the question of dream symbolism) by A. Angyal; *Warum vergisst man Träume* (Why one forgets dreams) by A. Angyal; and *Le Sommeil* (Sleep) by J. Lhermite. It is said that we forget dreams because awakening causes a sharp break in the stream of consciousness. Recall of a dream is generally possible only when an item from the dream recurs in waking life or can be revived by some association. The existence of symbolic dreams has been demonstrated in investigations not psychoanalytically oriented.—*M. F. Martin* (West Springfield, Mass.).

587. **Kirsch, J. Darstellung somatischer Phänomen im Traum.** (The representation of somatic phenomena in dreams.) *Ber. VI allg. ärztl. Kongr. Psychotherap.*, 1931, 157–162.—Every dream is to be understood in terms of the total life situation of the individual. Physical stimuli may give rise to the dream, but the factors which decide the specific form which a dream is to take are primarily mental. This is best illustrated in dreams of people suffering from functional disturbances, many of which lend themselves to ready explanation in terms of unconscious conflict.—*R. B. MacLeod* (Cornell).

588. **Kronfeld, A. Lehrbuch der Characterkunde.** (Textbook of the science of character.) Berlin: Springer, 1932. Pp. 451. M. 24.—Kronfeld offers us no additions to the study of character founded upon personal investigation and conclusions, but makes the attempt to bring together in a teachable summary all that has been accomplished up to now in the study of the whole field of character. The abundance of material and the multiformity of often opposing tendencies, methods, and schools, he has brought into a systematic organization. He treats the subject of character study from the viewpoints of psychiatry, biology of constitution, constitution types, and sex differences. Kronfeld emphasizes the fact that it would give an insufficient perspective to consider the living individual solely from the point of view of a fixedly static existence, as if he were the same in his characteristics irrespective of time and condition, that is, whatever time and condition his existence is set into.—*P. Plaut* (Berlin).

589. **Leibbrand, W. Die forensische Beurteilung der überwertigen Idee.** (Forensic judgment of the idea of superiority.) *Ärztl. sachv. Ztg.*, 1931, 37, 211–214.—Cases are cited to illustrate how ideas of superiority may be drives toward criminality. The psychiatrist must attempt to understand punishable actions springing from such ideas in terms of their psychopathological structure.—*C. W. Fox* (Rochester).

590. **Marcuse, M. Erlebnis-Reproduction und -Abreaktion durch literarische Gestaltung in der Autokatharsis.** (Experience-reproduction and abreaction through literary expression in the auto-catharsis.) *Zentbl. f. Psychotherap.*, 1932, 5, 211–217.—A 24-year-old industrial employee, mentally of the small-bourgeois type and externally quite proletarian, was being analyzed for a tendency to blushing, which had persisted since childhood. After a period of resistance and increasing tension, he suddenly brought to the analyst a dramatic sketch representing his fantasies as to his birth. This had come to him suddenly when he was dozing. He wrote it down in great excitement, and when he finished, he felt "emptied out." The writing showed a depth of psychological insight and poetic feeling, as well as a grasp of dramatic form, of which he gave no indication in his usual state. Previously he had never felt the slightest inclination to literary production, although he had day-dreamed much since childhood, and he occasionally made clever remarks. After this auto-catharsis, he broke off the analysis. This case appears to the author to be almost unique in that, through auto-catharsis, creative powers, previously unsuspected, were freed. It is a contribution to the psychology and psychopathology of artistic creativeness and to the relationship between neurosis, psychotherapy, and productivity.—*M. E. Morse* (Catonsville, Md.).

591. **McKinney, F. Nitrous oxide anesthesia as an experimental technique in psychology.** *J. Gen. Psychol.*, 1932, 6, 195–199.—Nitrous oxide anesthesia is an experimental technique which has not been used but which seems to be applicable to many problems in psychology. The author gives the results of exploratory experiments using representative laboratory tests under different concentrations of the gas. The best concentration for continued partial anesthesia was ascertained, as well as the possibilities for use of other concentrations; and the most practical avenues of stimulation and response under the gas were learned. Under the gas, free association tended to become more peculiar, all reactions were slowed, learning ability decreased, suggestibility increased, tapping failed to show a decrement, and the senses did not show evidence of being more acute.—*H. Cason* (Wisconsin).

592. **Murphy, G. Symposium: Contributions of psychology to the understanding of personality and behavior. I. Modern fields and schools of psychology. What they offer at present and what they promise for the future for the study of personality and conduct problems.** *Amer. J. Orthopsychiat.*, 1932, 2, 315–326.—The article discusses four points: The first has to do with those psychological schools which are concerned with "the unique pattern, or organization, or totality which constitutes a given person as distinct from any other person"; i.e., the Gestalt and organismic view of personality. According to this view the organization of the whole sets definite limits to what the parts can be. This means that there may be a finite number of personality types. The discovery of these types is the problem of this group. The second kind of problem defines personality "in terms of special social causes," instead of biological patterns. Here we may find that the number of socially conditioned habit patterns is also definite, due to the limited number of compatible habits. The author suggests in the third place that these views are not necessarily antagonistic, but that a satisfactory eclecticism may be formulated on the basis of the testing of systematic hypotheses from all the schools. Finally, he suggests that after having determined the possible kinds of personality, it remains to discover the possible kinds of social order, and that psychology should cooperate in arriving at norms of social behavior.—*H. Peak* (Yale).

593. **Murphy, G., & Jensen, F. Approaches to personality.** New York: Coward-McCann, 1932. Pp. xv + 427. $3.75.—The book is divided into 8 chapters and 4 parts. The first part, *The Approach from Experimental Psychology*, deals with the possibilities for personality theory of Gestalt, associationism,

and behaviorism. The second, *The Psychology of Freud, Jung, and Adler,* is a historical and comparative account of these systems. The third, *The Child Guidance Approach to the Study of Personality,* is a detailed account of the techniques in use in clinics. The fourth, *Eclecticism and Genetic Method,* is an essay on the philosophy and methodology of the problem. The first and fourth parts were written by Murphy, the latter with the help of Lois Barclay Murphy; the second by Jensen; and the third by John Levy.—*R. R. Willoughby* (Clark).

594. **Olson, W. C. Symposium: Contributions of psychology to the understanding of problems of personality and behavior. III. Developmental norms, individual differences, and learning.** *Amer. J. Orthopsychiat.,* 1932, 2, 335–344.—In using the term *norm,* the psychologist may have in mind either the central tendency of a distribution of a measured trait or a more qualitative meaning such as a dating of the genetic development of certain behavior patterns. The critical point above and below which individuals may be considered for special treatment is arbitrary and may be placed at any point on the scale of measurement. The determination of norms for personality traits is more difficult than for mental examinations. The "all or none" character of traits implied by certain clinical terms is unsupported by the facts, as traits seem rather to be distributed and not dichotomous. Problems of ability of observers to report, validity and reliability of report, and the need for laboratory tools to measure the results of treatment are discussed. The nursery school worker is daily demonstrating the effectiveness of habit training in modification of children's behavior. Much remains for the psychologist to do in determining quantitatively the time sequences of behavior facts as influenced by infant and childhood experiences.—*H. Peak* (Yale).

595. **Patten, E. F. Does post-hypnotic amnesia apply to practice effects?** *J. Gen. Psychol.,* 1932, 7, 196–201.—Using a constant increment addition test, the author found that post-hypnotic amnesia does not apply to practice effects.—*H. Cason* (Wisconsin).

596. **Petrescu, C. I. Metode pentru studiul individualităţii.** (Methods for the study of individuality.) Bucarest: Institute of Pedagogics, 1931. Pp. 240. Lei 160.—The author considers the importance of individual psychology in contrast with the general psychology, for the study of school children. From the point of view of the former, he indicates the following methods: (1) empirical ones, founded on the relation between the body and the mind—phrenology, chiromancy, physiognomy and graphology; (2) scientific or experimental ones: (a) experimental-instrumental and tests, (b) observational, questionnaire, statistics, etc.—*M. Moldovan* (Bucarest).

597. **Pfister, O. Instinctive psychoanalysis among the Navahos.** *J. Nerv. & Ment. Dis.,* 1932, 76, 234–254.—Two cases are cited with their treatment and a discussion of the psychoanalytic significance of the symbolic methods used. The author retains the word psychoanalysis "because the Indians penetrated to the unconscious motivation of the psychoneurotic disturbance and applied the treatment individually," even though the procedure involves the use of suggestion. Such analysis has the advantage of brevity, and the use of such instinctive methods should be helpful in dealing with psychoneurotics.—*C. R. Atwell* (Boston Psychopathic Hospital).

598. **Richter, C. P. Symposium: Contributions of psychology to the understanding of problems of personality and behavior. IV. Biological foundation of personality differences.** *Amer. J. Orthopsychiat.,* 1932, 2, 345–354.—There are at least three factors of equal importance which must be taken into account in dealing with the personality: (1) the situation, (2) the internal drive, and (3) the organization of the individual, his habits, integrations of interests, abilities, etc. Experiments on certain internal drives, the glandular activity in rats, are reported. Running activity of these animals is compared before and after hypophysectomy, adrenalectomy, gonadectomy and thyroidectomy. It is found that removal of any of these glands markedly reduces activity and tends to cause the appearance of new cycles of activity. It was impossible consistently to produce hyperactivity experimentally.—*H. Peak* (Yale).

599. **Ross, T. A. An introduction to analytical psychotherapy.** New York: Longmans, 1932. Pp. 210. $3.50.—The writer discovers no contradiction between strictly psychoanalytical theories and those of Adler and Jung. The various chapters deal with: the unconscious, transference, dreams, sexuality, formation of symptoms, a case of luetophobia; dangers of analysis (which the writer believes do not exist) and technique.—*C. W. Fox* (Rochester).

600. **Scharf, C. Grundzüge der Psychologie C. G. Jungs.** (Characteristics of the psychology of C. G. Jung.) *Psychol. Rundschau,* 1932, 4, 100–106.—A brief sketch of the life of Jung, his acquaintance with Freud and the points of resemblance and difference in their theories and practices. The author analyzes Jung's four personality types, the rational, the emotional, the sensory, and the intuitive. The place of dream, symbol and fantasy in psychoanalysis are commented on. He points out that Jung's aim is largely therapeutic.—*A. B. Herrig* (Michigan Central State Teachers College).

601. **Schmalhausen, S. D. [Ed.] Our neurotic age; a consultation.** New York: Farrar & Rinehart, 1932. Pp. 546. $4.00.—(Not seen).

602. **Schultz-Hencke, H. Zum Wertproblem in der Psychoanalyse.** (On the problem of value in psychoanalysis.) *Zentbl. f. Psychotherap.,* 1932, 5, 539–548.—In so far as psychoanalysis is a natural science, it can only determine facts and cannot demonstrate the validity of certain values. The analyst himself, however, posits values, both in research and in therapy. These value-positings relate essentially to the desires for property, respect and sexual satis-

faction. In these three fields the analyst relativizes the value-world of the patient and incites the positing of new values. It is an immediate problem for psychoanalysis to realize its own partially evaluative character.—*C. W. Fox* (Rochester).

603. **Sellheim, N. Wechseljahre der Frau. Ihre Bedeutung für das Leben.** (The menopause in women. Its significance for life.) Stuttgart: Enke, 1932. Pp. 47. RM. 1.90.—An attempt to dispel unwarranted anxieties in women connected with the approaching menopause.—*R. B. MacLeod* (Cornell).

604. **Stalnaker, J. M., & Riddle, E. E. The effect of hypnosis on long-delayed recall.** *J. Gen. Psychol.*, 1932, 6, 429–440.—Twelve deep-trance university students were used as subjects in studying the relative ability to recall, in the waking and trance states, logical material which had been learned a year or more before. The directions given the subjects in the trance state were not the same as those used in the waking state; in the trance state they were told that they would be able to recall the material easily. Under these conditions some hypermnesia was found in the trance state.—*H. Cason* (Wisconsin).

605. **Stevick, P. R. The progressive-weights test of suggestibility with adults.** *Amer. J. Psychol.*, 1932, 44, 807–808.—The author reports a study made on 187 unselected adults with a series of weights, conspicuously numbered from 1 to 15, the first 4 of which weighed 20, 40, 60, and 80 grams respectively, while all the rest weighed 100 grams. The weights were arranged in order on top of a table and the S asked to lift each one once, and report whether it was heavier, lighter, or the same as the one before it. The results showed that 62% show no signs of a suggestion of progressive increase. Only about 20% register more than 1 score-point in suggestibility. The author concludes that the study substantiates recent research which points away from any such general trait as suggestibility.—*D. E. Johannsen* (Skidmore).

606. **Suttie, I. D., & Suttie, J. I. The mother: agent or object?** *Brit. J. Med. Psychol.*, 1932, 12, 91–108.—Those repressions which are due to the will of the loved and desired object are called "endogenous," those arising from the fear of an intruding third party "exogenous." The maternal repression is usually endogenous, and more effective than the paternal repression. These considerations are given ethnological applications to patriarchal and matriarchal cultures. Infantile instinct is said to be despecialized, i.e., the total diffused instinct mass is focused at first on the mother, but can be redirected by her to bring the child into friendly terms with reality.—*E. R. Hilgard* (Yale).

607. **Taussig, L. Psychophysiologische Beziehungen von Schlaf und Psychose.** (Psychophysiological relationships between sleep and psychosis.) *Rev. neur. a psychiat.*, 1931, 28, 387–398.—The hypnogenic zone includes the tuber cinereum and infundibulum, and the floor and probably the posterior wall of the third ventricle. It is not a center for sleep but for wakefulness, and hence lesions in this vicinity cause drowsiness, loss of consciousness, twilight states, narcoleptic attacks, and Korsakoff's syndrome. Waking is not a passive but an active phenomenon, and is both the oldest and the most primitive expression of the central life-principle, which Haškovec has called the central consciousness and Heveroch, the ego. In contrast to waking, sleep is a passive process, caused by physiological dulling of waking. It represents a rhythmic reversible hypofunction of our ego. Actual psychoses are a dysfunction, and the psychoneuroses only a mild irritability of this center. The striking similarity of the psychic state of mental patients to that of sleepers and dreamers is explained by the fact that in both cases there is a change in waking and the central consciousness in the floor of the third ventricle.—*M. E. Morse* (Catonsville, Md.).

608. **Thomson, G. H. Instinct, intelligence and character.** (2nd ed.) London: Allen & Unwin, 1932. Pp. 282. 10/6 net.—*F. C. Bartlett* (Cambridge, England).

609. **Vorwahl, H. Die Situation der Psychoanalyse.** (The position of psychoanalysis.) *Psychol. Rundschau*, 1932, 4, 97–100.—This is a discussion of the Freudian contribution, accompanied by an analysis of the subconscious. It attributes to Freud a new insight into the psychical, namely the significance of an individual's previous history, the idea that man is subject to therapeutic measures, and a technic for such measures.—*A. B. Herrig* (Michigan Central State Teachers College).

610. **Wang, C. K. A. The significance of early personal history for certain personality traits.** *Amer. J. Psychol.*, 1932, 44, 768–774.—Answers on a questionnaire respecting the early history of 358 university students were correlated with scores on the Allport A-S test, the Freyd introversion-extroversion test, the Pressey X-O test, the Moss social intelligence test, and the Otis suggestibility test. Results indicate that a study of an individual's early life may produce facts which are significant in determining some of his later personality traits. "The largest and most reliable of the significant facts in early personal history are found for predicting introversion-extroversion, the fewest and least reliable for emotionality."—*D. E. Johannsen* (Skidmore).

611. **Wells, F. L. Symposium: Contributions of psychology to the understanding of problems of personality and behavior. II. Evaluation of personality and character tests.** *Amer. J. Orthopsychiat.*, 1932, 2, 327–334.—The author begins by warning against over-quantitation of data which do not lend themselves to such treatment. Certain kinds of quantitative approaches are discussed as tools for observing human adjustment under the three categories: the energetic, the temporal, and the social. "For immediate purposes, we may take the view . . . that human conduct has a value according as it is energetic rather than apathetic, deals with long-time relations, and serves rather than exploits the social

environment." Intelligence tests, the verbalized self-analysis techniques, measures of "sustained tensions," physiological factors, and tests of ethical and moral reactions are discussed along these lines.—*H. Peak* (Yale).

[See also abstracts 386, 398, 464, 502, 516, 524, 637, 640, 678, 726.]

NERVOUS AND MENTAL DISORDERS

612. **Biemond, A. Anatomische Untersuchungen über das Kleinhirn an Hand eines Falles progressiver Demenz und Ataxie bei einem Kinde.** (Anatomical investigations of the cerebellum in a case of progressive dementia and ataxia in a child.) *Acta psychiat. et neur.*, 1932, 7, 761–784.—The case described is that of a 5-year-old girl who apparently developed normally up to three years of age and then began to have epileptic fits and to show general sluggishness of speech and action. This grew progressively worse, culminating in inability to talk and walk and "almost complete idiocy." By gross observations and microscopic slides, various anatomical abnormalities were found, among these a diffuse cortical degeneration in the cerebrum, showing a general similarity to the histological picture of "amaurotic idiocy." Various cerebellar abnormalities were interpreted as "developmental disturbances." Degeneration was also apparent in the dentate and the arcuate nuclei. Several cuts illustrate the article, which also carries an extensive bibliography.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

613. **Byrom, F. B., & Russell, D. S. Ependymal cyst of the third ventricle.** *Lancet*, 1932, 223, 278–283.—A woman, aged 49, was found to be suffering from diabetes mellitus. She was emotionally unstable, being subject to weeping spells and profound depression. After death necropsy showed an ependymal cyst in the roof of the third ventricle. It is suggested that mechanical irritation of the hypothalamus by the tumor produced "a chronic sympathetic hyperglycemia which, in the presence of an hereditary predisposition to diabetes mellitus, eventually merged into the latter condition."—*D. J. Ingle* (Minnesota).

614. **Charpentier, R. De l'idée de dégénérescence à la doctrine des constitutions.** (From the concept of degeneration to the doctrine of constitution.) *J. de neur. et de psychiat.*, 1932, 32, 137–169.—Reviewing the literature on the subject as far back as the 17th century, the author traces the development of psychiatric opinion regarding the rôle which heredity and predisposition play in mental disorders. The early view was that mental degeneration depended entirely on heredity, and Morel (1857) divided hereditary mental disorders into four groups: individuals of congenitally nervous temperament, liable to insanity without apparent cause; individuals with hereditary intellectual, physical and moral defects; persons with marked and early physical signs of degeneration and limited intelligence, who soon become demented; imbeciles and idiots. Magnan (1895) distinguished between two great classes, the one corresponding to Morel's first group and the second including mental disorders which might occur as an accident in the life of a normal person. His is the first sharp distinction between constitutional or degenerative and accidental psychoses. The theory of degeneration does not restrict itself to the hereditary insanity of Morel; it adds the concept of acquired or accidental influences which act upon the individual at an early age and may become the cause of degeneration. If the mental disorder develops without hereditary predisposition, there is for Magnan always an acquired disposition. Thus the concept of degeneration, hereditary or acquired, is substituted for the more limited idea of hereditary insanity. This in turn leads to the thesis of psychopathic constitutions, which Dupré has classified in eight groups. The close connection between character and the organic structure of the organism has been pointed out by many writers, and the author gives a survey of the most important views.—*H. Syz* (New York City).

615. **Clayton, F. A case of cerebral tumour.** *Lancet*, 1932, 222, 835.—A male, aged 22, developed a severe headache while sun-bathing. A few weeks later the headache was constantly present and became associated with double vision and frequent vomiting. The tumor could not be located, but a subtemporal decompression was performed and later treatment with radium was given. The symptoms disappeared.—*D. J. Ingle* (Minnesota).

616. **Cohen, H. The treatment of narcolepsy with ephedrine.** *Lancet*, 1932, 223, 335–337.—That ephedrine is of value in the symptomatic treatment of narcolepsy is indicated by the 8 case records of the author and those reported by other observers. Since the attack frequently follows an emotional reaction it has been suggested that the seizures might be due to inability of the adrenals to deliver quickly sufficient adrenin during emotional stress.—*D. J. Ingle* (Minnesota).

617. **Creak, E. M. A case of narcolepsy.** *Lancet*, 1932, 223, 514–515.—A girl, aged 7, with nothing unusual in her history or heredity, manifested cataplectic attacks and periods of irresistible sleep. The cataplectic attacks usually followed an emotional state such as hearty laughter. Only 4 other cases of narcolepsy are known to have occurred before the age of 10.—*D. J. Ingle* (Minnesota).

618. **Curran, D., & Minski, L. The use of nembutal in psychiatry.** *Lancet*, 1932, 223, 126–127.—The authors studied the effect of nembutal on each of 53 psychiatric cases. As a hypnotic it proved to be of considerable value and no unpleasant after-effects were noted. It is effective in decreasing agitation and anxiety, to allay motor restlessness, and to ensure sleep. The drug was given by mouth in doses from 3–6 grains.—*D. J. Ingle* (Minnesota).

619. **Davis, C. C. Acute encephalitis and the Korsakow symptom-complex.** *Lancet*, 1932, 222, 670–671.—Two cases are reported in which the history,

clinical and laboratory findings suggest acute epidemic encephalitis. Both patients were disorientated and manifested memory disorders characteristic of the Korsakow symptom-complex.—*D. J. Ingle* (Minnesota).

620. **Davis, J. E. The therapeutic relationship of interest to effort.** *Occup. Therap. & Rehab.*, 1932, 11, 367–386.—The outstanding problem for the therapist is to discover something of a therapeutic character which the patient will voluntarily accept. Catatonic praecox types are often quite successful in athletic competition, such as volley ball. Motivation, interests, and incentives are important in leading the whole personality toward some constructive effort. Motivation is the most important of these three.—*H. E. Burtt* (Ohio State).

621. **Doll, E. A., Phelps, W. M., & Melcher, R. T. Mental deficiency due to birth injuries.** New York: Macmillan, 1932. Pp. 289. $4.50.—Although physical disabilities following birth injury have been recognized by the medical profession for some years, birth injury as a factor in causing mental retardation has never received very adequate attention by either physicians or psychologists. The present authors class it as one of the definite clinical categories of mental deficiency. Their investigation reveals an estimate of 5 to 10% as birth-injured in a fairly representative institution of about 500 mentally deficient children and adults. This book represents the preliminary work of an extensive investigation on birth-injured subjects which is now being conducted at The Training School at Vineland, New Jersey. It has as a nucleus 12 intensive case studies. The 12 subjects, whose ages range from 4 to 39 years, show varying degrees of mental and physical handicaps. Their studies are developed in terms of etiological and developmental histories, comprehensive neurological examinations, representative mental and physical measurements, and observational records. The literature on the subject is reviewed, and the etiology of the condition discussed. The consequences of birth injury as related to mental deficiency and motor handicaps are described. Methods of mental measurement are illustrated. The mental and physical benefits arising from physical therapy, particularly that of motor re-education, are evaluated. A study of the mental growth over a period of years, in 9 of the 12 cases, showed a marked tendency toward delayed mental development. Bearing on the prognostic value of the Stanford Binet in cases such as these, a methodology was devised which analyzed the differential difficulty of the individual tests of the Binet for the birth-injured feeble-minded as compared with normals, and for the ordinary feeble-minded as compared with normals. This was done in order to analyze the extent to which the relative difficulty of the tests for the birth-injured feeble-minded was due on the one hand to birth injury and on the other hand to feeble-mindedness. Pictures of the subjects, an appendix comprising the 12 case histories, a bibliography of 64 titles, and an index are included.—*M. W. Kuensel* (Chicago, Ill.).

622. **Doll, E. A., & Aldrich, C. G. Simple conditioning as a method of studying sensory discrimination among idiots.** *J. Gen. Psychol.*, 1932, 7, 104–143.—The purpose of the study was to establish a method of studying conditioning in idiot children, and a means of estimating the sensory equipment of these children below the mental ages where adequate verbal instructions may be given. The observer was not present in the room with the idiot, and a food lure was used with 10 subjects. An attempt was made to keep the procedure of such a nature that it could be used with both preschool children and the higher apes as well as with idiot children. The problem consisted in conditioning the subjects to one of two boxes, differing only in size. The boxes were placed on a table, and a cookie was placed under one box to serve as a lure. Observations were made through a one-way vision screen. After the first conditioning, the lure was placed under the opposite box and a second conditioning took place which called for the inhibiting of the learned response and the substitution of the opposite one. This was followed by a third and a fourth conditioning, alternating the placement of the lure with each conditioning problem. These problems were followed by experiments on size discrimination, the first of which was a test to determine whether the selection was made on the basis of relative or absolute choice. This was accomplished by maintaining the same ratio between the two boxes, but using the smaller box of the original pair as the larger box of the new pair. The subjects displayed varied abilities in the problems. Perseveration was prevalent in varying degrees among all subjects. In all but two of the subjects choices were temporarily made on the basis of position. The three subjects who failed the problem had the strongest position preferences. There were obvious effects from the change in incentive. Learning ability showed very little relation to mental age within the limits of this group, especially among those ranging between two and three years on the Kuhlmann-Binet scale. The Gesell and Merrill-Palmer tests showed the same lack of marked relation to learning ability. There was apparently no relation between life age and learning ability. The average time per trial decreased in the latter half of the learning period, and the decrease seemed to accompany the successful rather than the unsuccessful trials. Changing the actual boxes used, but maintaining the same ratio, showed that eight of the nine subjects chose the box relatively rather than absolutely.—*H. Cason* (Wisconsin).

623. **Dubitscher, F. Der Rorschachsche Formendeuteversuch als diagnostisches Hilfsmittel.** (Rorschach's form-interpretation experiment as an aid in diagnosis.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 138, 515–535.—190 subjects (normal individuals, individuals with nervous disorders, psychopaths and hysterics) were tested by means of Rorschach's ink-blot figures. The subjects were classified according

to disease-groups, somatic constitution (Kretschmer) and affective temperament. In general the diseased subjects were more limited in their responses than were the normals. Normal asthenics showed a maximal capacity for attention and concentration and marked displeasure toward color. Pyknics showed pleasure toward color. The formulae for the experience-types (extratensive, etc.) of the various constitutional types are similar to those of certain psychoses. The experiments permit qualitative but not quantitative inferences concerning disease-forms.—*C. W. Fox* (Rochester).

624. **Engel, S. Stauungspapille.** (Choked disk.) *Fortsch. d. Neur., Psychiat. u. Grenzgeb.*, 1932, 4, 372–380.—The author discusses the theories of pathogenesis of choked disk; its relationship to the size, site, and rapidity of growth of tumors, and to the protein content of the cerebrospinal fluid; the changes in the disk in myopia; and the sudden appearance of choked disk with tumors of the posterior fossa. In general, there is a parallelism between the increase of intracranial pressure and the development of choked disks. Engel reviews the literature on choked disk in nephritis, hypertonia, leukemia, and polycythemia. The cause in these diseases is probably also an increase of intracranial pressure, produced by changes in the viscosity of the blood or injury to the vessel walls. A comprehensive bibliography (German, French, and English) is given.—*M. E. Morse* (Hyattsville, Md.).

625. **Ewald, G. Schizophrenie.** *Fortsch. d. Neur., Psychiat. u. Grenzgeb.*, 1932, 4, 382–415.—Ewald gives a bibliography of 9½ pages, covering the literature on schizophrenia for 1930–1931 in various languages. On the basis of these articles, he discusses the problem of schizophrenia under the headings: etiology; pathogenesis; clinical description; paraphrenia and late katatonia; schizophrenic reactions; symptomatic schizophrenia; the katatonic syndrome and schizophrenia as organic-neurological reactions; constitutional, hereditary, and racial factors; psychological problems; biological changes, including internal secretions, metabolism, blood, and cerebrospinal fluid; histological findings in the brain; and therapy. Ewald himself leans strongly to the organic viewpoint on schizophrenia.—*M. E. Morse* (Hyattsville, Md.).

626. **Galatschian, A. Zur Frage des ungünstigen Endzustandes bei manisch-depressivem Irresein.** (The question of unfavorable terminal state in the manic-depressive psychosis.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 139, 241–248.—A delimitation of the unfavorable terminal state of the manic-depressive psychosis from arterio-sclerotic exhaustion has offered great difficulties. In this case, microscopic examination of the brain of one patient showed no trace of sclerotic degeneration. The writer suspects that in certain cases like the present one a heterozygotic bearer of schizophrenic factors may be involved in addition to a homozygotic carrier of the manic-depressive disposition.—*C. W. Fox* (Rochester).

627. **Ginsburg, S. Masked thyrotoxicosis simulating primary neurosis.** *J. Nerv. & Ment. Dis.*, 1932, 76, 331–357.—The author summarizes that: thyrotoxicosis affects persons of all ages, it may be produced by emotional shock and strain, it may exist without thyroid enlargement or exophthalmos, its constitutional symptoms resemble closely the manifestations of the neuroses, and in atypical forms have been mistaken for pure neuroses. Six cases are cited.—*C. R. Atwell* (Boston Psychopathic Hospital).

628. **Glaser, J. Zum gegenwärtigen Stand der Frage vom moralischen Defekt.** (The present status of the question of moral defect.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 138, 93–103.—The doctrine of moral defect has not yet been clarified sufficiently, either clinically or theoretically. The development of moral feelings is, fundamentally, independent of that of intelligence. The writer discusses various theories of innate moral defects (Krafft-Ebing, Binswanger, Kraepelin, Bleuler). Cases of apparent "moral insanity" which have later developed into schizophrenia (Kahlbaum's heboidophrenia) are familiar; Staehelin particularly has shown the close connections between the two. In the rare cases of "genuine moral defect" two components seem to be necessary: emotional poverty and autistic disharmony of impulses. The writer suggests that the terms "moral *Schwachsinn*" and "moral oligophrenia" are preferable to older terms, such as "moral insanity" and "innate criminality."—*C. W. Fox* (Rochester).

629. **Graves, T. C. Non-specific therapy in mental disorder.** *Lancet*, 1932, 223, 57–60; 115–121.—Infectious diseases may cause mental disorder directly if the infective process is acute. Mental symptoms are dependent upon toxic or organic changes in the nervous system, such as occur in infection delirium, fever delirium, collapse delirium, post-infection psychoses, and encephalitis. If there is an unresolved residuum of the acute process, a chronic process may persist and mental symptoms make their appearance long after the original infectious disease has subsided. Chronic infections are most likely to be found in the nose, nasal sinuses, ear, or tonsils. They most frequently follow measles, scarlet fever, and influenza. Among the sensory symptoms headache is first. Later there may be hyperesthesia, paresthesia, and disturbances of taste, vision, and equilibrium. There may be motor symptoms and metabolic disturbances. Insomnia is common and in some cases is the only symptom. Cycles of emotional disturbances occur, involving fear and depression and at times intense irritability. There may be intellectual disturbances, such as mental fatigue, confusion, disorientation, hallucinations and delusions. Periods of near normality in the mental state occur, but the cycles grow longer and more severe until a psychotic condition is reached. Methods of treatment are discussed, but are not of interest to the psychologist except to note that recovery from the mental disorder follows the clearing up of infection. Sixteen case studies are included.—*D. J. Ingle* (Minnesota).

630. **Harlow, H. F., & Israel, R. H. Comparative behavior of primates. IV. Delayed reaction tests**

on subnormal humans. *J. Comp. Psychol.*, 1932, 14, 253–262.—The delayed reaction tests were similar to those used in the earlier tests of this series. The results indicate that "Idiots and low grade imbeciles are able to respond successfully to delays of fifteen seconds with little or no practice. They appear to be definitely superior in this regard to the typical Catarrhine monkeys." The improvement shown by these subjects did not indicate greater learning ability than that shown by the old world monkeys. There was no correlation with mental age. The half-half reliability of the delayed reaction tests was .85. Bibliography.—*N. L. Munn* (Pittsburgh).

631. **Harris, W., & Wright, A. D. Treatment of clonic facial spasm.** *Lancet*, 1932, 222, 657–662.—Spontaneous cure of clonic facial spasm never occurs. Favorable but temporary results follow alcohol injection of the facial nerve. The authors have brought about permanent cures by nerve anastomosis.—*D. J. Ingle* (Minnesota).

632. **Henry, G. W. Catatonia in animals. Experimental studies of the effect of bulbocapnine and other drugs.** *Amer. J. Psychiat.*, 1932, 11, 757–793.—Experimentally induced catatonic conditions in animals, by the use of drugs, are described. The author finds that "practically all of the motor phenomena characteristic of human catatonia can be duplicated in the higher animals" by injecting bulbocapnine, with the animals possessing the more highly developed nervous systems showing the more complete states of catatonia. Thus the mouse, the cat, and the monkey presented the completer catatonic pictures, which appeared only imperfectly in the bird, and not at all distinctly in the salamander, lizard, frog, fish, or turtle. The author concludes the findings are evidence of toxic factors in human catatonia.—*S. J. Beck* (Boston Psychopathic Hospital).

633. **Hinds-Howell, C. M. Some effects of trauma on the nervous system.** *Lancet*, 1932, 222, 115–118.—Head injuries are among the most frequent traumatic causes of nervous disorder. A prolonged loss of consciousness following a blow on the head indicates that something more than simple concussion has occurred and that there may be serious hemorrhage. The hemorrhage may be extradural, subdural, or subarachnoid. The symptoms associated with each are described. Head injury may result in such disorders as paralysis, epilepsy, mental disorders ranging from insanities to loss of memory, irritability of temper, severe headache, and traumatic neurasthenia. Injury to any part of the brain may result in epilepsy, and the period elapsing between the injury and the first convulsion may vary greatly. The so-called traumatic neurasthenia differs in no way from ordinary neurasthenia, and is most frequent in those who are able to gain compensation by it. Trauma may be a factor in causing latent organic disease of the nervous system to become active. It is occasionally observed that syphilis of the nervous system manifests itself shortly after trauma. Injuries to the spinal cord and the resulting symptoms are discussed.—*D. J. Ingle* (Minnesota).

634. **Jahrreiss, W. Die angeborenen und früherworbenen Schwachsinnszustände.** (Inherited and early acquired mental deficiency.) *Fortsch. d. Neur., Psychiat. u. Grenzgeb.*, 1932, 4, 454–470.—A survey of recent literature bearing upon the problem of the physical bases of mental deficiency. A comprehensive bibliography is included.—*R. B. MacLeod* (Cornell).

635. **Jameison, G. R., & Wall, J. H. Mental reactions at the climacterium.** *Amer. J. Psychiat.*, 1932, 11, 895–909.—The report is based on a study of four cases "representative of reactions occurring at the climacteric period." Physical and psychological factors in diagnosis and treatment are discussed. The authors find that involution melancholia is probably not a clinical entity in itself, and the manifestations must be considered in the light thrown by longitudinal section studies of the patients' lives. "Any type of border-line or frank mental disease may appear" at the climacterium.—*S. J. Beck* (Boston Psychopathic Hospital).

636. **Johnstone, G. G. A case of acrocephalosyndactylism.** *Lancet*, 1932, 223, 15–16.—A boy now 5 years old has been under observation since 3 weeks of age. The syndrome included a large hydrocephalic head, large eyes, small body, and complete syndactyly of hands and feet with the exception of the thumbs. The boy is mentally below average, is timid and affectionate, but manifests a bad temper when annoyed. This disorder is of rare occurrence.—*D. J. Ingle* (Minnesota).

637. **Jørgensen, C. Psykoneuroser og psykoterapi.** (Psychoneuroses and psychotherapy.) Copenhagen: Gyldendalske Boghandel, 1932. Pp. 166.—The author offers a critical exposition of theories and methods from the death of Charcot to the present time. Janet, Freud, Jung, and Adler are particularly discussed in detail.—*M. L. Reymert* (Moosheart Laboratory for Child Research).

638. **Kauders, O. Zur Klinik und Analyse der psychomotorischen Störungen.** (The clinical treatment and analysis of psychomotor disturbances.) *Monatssch. f. Psychiat.*, 1931, Beih. 64. Pp. 132. RM. 12.60.—Specific cases of delirium with accompanying motor disturbances are described, and the importance of a study of motor disturbance as an aid to the understanding of the total disorder is stressed. The general point of view of Wernicke is accepted.—*R. B. MacLeod* (Cornell).

639. **Kennedy, F. Clinical convulsions.** *Amer. J. Psychiat.*, 1932, 11, 601–609.—The author discusses convulsions and concomitant mental phenomena observed in his clinical experience. He concludes that "we may associate the many types of epileptic expression with appropriate neural areas, which have been the objective of vascular attack."—*S. J. Beck* (Boston Psychopathic Hospital).

640. **Klatt, G. Psychologie des Alkoholismus.** (Psychology of alcoholism.) Halle: Marhold, 1932. Pp. 79. RM. 2.75.—A discussion of the psychological basis of moderate drinking from a viewpoint similar to those of Nietzsche and Adler. The drinker

is regarded as one who has an inferiority complex, and is willing to accept this easy way of escaping from his conflicts and realizing his longings. Consequently individual analysis is considered as the best way of curing alcoholism. Attention is drawn to the early connection of drinking customs with magic. —*R. B. MacLeod* (Cornell).

641. **Kolle, K. Sexualpsychopathologie.** *Fortsch. d. Neur., Psychiat. u. Grenzgeb.*, 1932, 4, 361–371.—Kolle reviews the German literature on exhibitionism since Kronfeld's monograph in 1923, drawing also on his own experiences as consulting psychiatrist to the Kiel police department. He discusses the exhibitionist's personality and the psychoanalytic interpretation of the act. Although there is general agreement that the personality is of an infantile, timid, and passive psychopathic type, this represents only one factor. We are still far from a satisfactory explanation of the multiple etiology. Exhibitionism is most frequent between 31 and 40 years; it is rare in youth and old age. The cases usually belong to the proletariat, rarely to the intellectuals, whose sexual difficulties take rather the form of perversities or neuroses. Recurrence is less frequent than is generally assumed. As psychotherapy has had little success, castration or sterilization has many advocates. Legal conviction alone apparently brings many cases back to normal moral conduct; hence the essential exhibitionist should not be exonerated, but put on probation under medical supervision. The various factors in the case determine the further treatment. An extensive German bibliography is given. —*M. E. Morse* (Hyattsville, Md.).

642. **Kranefeldt, W. M. Bericht über das Zweite Deutsche Seminar von C. G. Jung in Küsnacht-Zürich vom 5–10 Oktober, 1931.** (Report of the second German seminar of C. G. Jung at Küsnacht-Zürich, October 5–10, 1931.) *Zentbl. f. Psychotherap.*, 1932, 5, 129–131.—In this seminar, held at the request of the German participants of the preceding year, Jung took up a series of fantasies of patients who illustrated their inner pictures and dreams with brush and crayon. Kranefeldt describes the impressions which Jung's brilliant teaching made on his audience, and gives a brief exposition of his viewpoint. His deepest insight and greatest skill were shown at this meeting in the way in which he made these patients unrecognized leaders in whom the new light is hidden and who are compelled along this dark path. Recently, Jung has made his deepest and most productive discoveries through studies of Eastern material, particularly the Chinese Mandala-symbolism and the Indian Chakra-teaching. Perhaps this basic Eastern knowledge of the soul, rediscovered through modern Western psychology, may prove to be the germ of an organic interpenetration of the West and the East. How far a person is able to go toward the East is an individual problem. The dissociation of our Western consciousness makes a merely external approach an empty illusion. Another difficulty is that whoever adopts the Eastern solution must have overcome the moral problem.—*M. E. Morse* (Catonsville, Md.).

643. **Krisch, H. Die Interpretation schizophrener Symptome als Funktionsabbau.** (The interpretation of schizophrenic symptoms as functional exhaustion.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 138, 109–121.—Many schizophrenic symptoms may be viewed biologically as phenomena of disintegration. Between normal and schizophrenic thinking there is a difference in energy tension. The writer distinguishes three types of schizophrenic disturbances in thinking: (1) interruption of course of thought; (2) lack of determining tendencies; (3) plastic and visual character of thoughts (as in dreams). Several case-studies are reported. Dreams and schizophrenic symptoms are compared. An analysis of schizophrenia in dynamic categories must supplement the static and morphological interpretation. A biological explanation of schizophrenic symptoms, primitive and complex, is possible.—*C. W. Fox* (Rochester).

644. **Kunz, H. Die Grenze der psychopathologischen Wahninterpretation.** (The limits of the psychopathological interpretation of delusions.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1931, 135, 671–714.—Kunz discovered that in trying to submit psychotic phenomena, especially the schizophrenic syndrome, to a philosophical and an anthropological interpretation, much which is important for psychopathology is lost, and it is this portion which he discusses here. The usual definitions of delusions have originated from clinical necessity and are theoretically untenable because they do not take into consideration the multiplicity of possible interpretations of the phenomena. Kunz's exhaustive metaphysical discussion proceeds from the fundamental thesis that in schizophrenia we have a peculiar kind of structure which is psychologically incomprehensible. It lies beyond the limits of psychopathological method and hence is a field for an "existential philosophy" or a philosophical anthropology.—*M. E. Morse* (Catonsville, Md.).

645. **Lewis, N. D. C., & Hubbard, L. D. II. Epileptic reactions in the negro race.** *Amer. J. Psychiat.*, 1932, 11, 647–677.—This second article in a series on mental phenomena in the negro reports findings in 160 cases of epilepsy observed at St. Elizabeth's Hospital (Washington, D. C.). They were found to fall into five groups: with confused states, with progressive deterioration, with mental deficiency, with schizophrenia, and with organic brain disease. Data are presented from the histories of the patients, together with the authors' studies of the physical and mental status. Among mental phenomena noted and discussed are deliria, anxiety, religiosity, sadism, paranoid trends, hallucinations, and superstitious interpretations in connection with the convulsions. Bibliography.—*S. J. Beck* (Boston Psychopathic Hospital).

646. **Malamud, W., & Palmer, G. The rôle played by masturbation in the causation of mental disturbances.** *J. Nerv. & Ment. Dis.*, 1932, 76, 220–233.—A discussion of writers on this subject leads to the conclusions that (1) "the practice of masturbation at puberty or during early adolescence occurs in such high proportions in the cases investigated that for

practical purposes it can be considered as a usual phenomenon. (2) This practice per se cannot be said to lead to mental or physical ill effects in all persons in whom it occurs. (3) In a large percentage of these persons the practice even when continued in adult life could not be shown to produce ill effects." The authors further summarize that: (1) "Masturbation must be regarded as an important factor in the developmental of mental diseases. (2) It does play such a rôle by virtue of certain psychic attitudes adopted by the patient towards the possible sequelae of such a practice and not because of the effects of masturbation itself." Cases are divided into three groups: (1) where masturbation was the most important cause of the disturbance, (2) in which it was only one of several factors, and (3) where it served only as a precipitating cause. Cases of the first group are cited; the article is to be continued.—*C. R. Atwell* (Boston Psychopathic Hospital).

647. **Malamud, W., & Palmer, G. The rôle played by masturbation in the causation of mental disturbances.** *J. Nerv. & Ment. Dis.*, 1932, 76, 366–379. —(Conclusion.) Further cases are cited and the authors conclude that: (1) in a certain number of mentally diseased persons, the development of the disease is closely related to the practice of masturbation; (2) the conditions observed in these cases are closely associated with conflicts that are brought in by the attitudes taken by these persons to masturbation, its effects and implications; (3) the development of an abnormal mental state in relation to such a conflict is not an invariable concomitant of masturbation; (4) the development of the abnormal state showed no definite relationship to the continuation of masturbation into adult life, and no proof was found that excessive masturbation led to the development of the disturbances; (5) these mental deviations were found more frequently in men than in women, the highest number in the former occurring at about adolescence, in the latter at the pre-climacteric period; (6) psychotherapy was found to be very effective in the readjustment of the patients.—*C. R. Atwell* (Boston Psychopathic Hospital).

648. **Manser, I. B. Beitrag zur Frage der verminderten Zurechnungsfähigkeit.** (Contribution to the question of impaired responsibility.) Halle: Marhold, 1932. Pp. 92.—Primarily a criticism of Wilmann's views concerning impaired responsibility. The writer maintains that precautionary measures in the cases of psychopaths with impaired responsibility are financially possible in Switzerland.—*C. W. Fox* (Rochester).

649. **Marinesco, G., & Nicolesco, M. J. Note sur un cas d'hystérie.** (Note on a case of hysteria.) *J. de neur. et de psychiat.*, 1932, 32, 7–17.—Hysteria is the result of a psychological disturbance which predisposes the patient to suggestibility and thus permits him to fixate more easily conditioned reflexes of a pathological type. The author describes the case history of a female patient of 17 who suffered from attacks of general rigidity followed by hallucinations and by a visual disorder which caused the patient to see certain persons in a peculiarly deformed way. In addition there were disturbances relating to the vago-sympathetic system. There is a relation between hysterical phenomena and the disorders of the function of the extra-pyramidal centers.—*H. Sys* (New York City).

650. **Meyer, F. Das retikulo-endotheliale System der Schizophrenen. Experimentell-klinische Untersuchungen zum Schizophrenieproblem.** (The reticulo-endothelial system of schizophrenics. Experimental clinical investigations of the problem of schizophrenia.) *Monatssch. f. Psychiat.*, 1931, Beih. 65. Pp. 124. RM. 12.00.—90 patients, the majority of whom were schizophrenic, were studied. Most of these, and all of the serious cases, revealed disturbances in the functioning of the reticulo-endothelial apparatus. It is suggested that in schizophrenia there may exist a lack of defensive resources based on an inherited inferiority of this apparatus. The first chapter contains a survey of the somatic etiological theories of schizophrenia, and the final chapter includes a series of illustrative case histories.—*R. B. MacLeod* (Cornell).

651. **Mora, J. M. Periodic paralysis occurring in the course of exophthalmic goiter.** *Endocrin.*, 1932, 16, 407–408.—The author reports the case of a male, 33 years old, who suffered from thyrotoxicosis and also presented symptoms of periodic paralysis. Only four other cases have been reported in the literature. —*D. J. Ingle* (Minnesota).

652. **Morgan, J. J. B. Workbook in abnormal psychology. Form B.** New York: Longmans, Green, 1932. Pp. 88. $.80.—Form B of the work-book designed to accompany the author's *The Psychology of Abnormal People.* (See VI: 295.)—*R. R. Willoughby* (Clark).

653. **Morland, A. The mind in tubercle.** *Lancet*, 1932, 222, 176–178.—"If the tuberculosis physician could learn so to influence the minds of his patients that they acquired a proper attitude towards the disease, the greatest therapeutic advance of the century would have been achieved." Resistance to tubercle as well as other diseases may be lowered as the result of psychic trauma. Undesirable reactions to diagnosis on the part of the patient may be a refusal to believe that he has the disease, or he may accept the diagnosis and show extreme shock and fear. During treatment the patient may react in one of the following ways: he may manifest anxiety and be over-cautious in regard to every detail of his health; the idea of having the disease being inacceptable to the mind of the patient, he attempts to maintain a standard of physical prowess which could be expected only of a healthy body; the patient may force himself to accept the attitude that his disease is not serious, but with unfavorable progress an underlying fear that he will not recover forces the regression from reality to the extreme form known as spes phthisica; the patient may project his fears and develop the belief that his fellow patients are in more serious condition than himself; he may rebel against orthodox treatment, claim a lack of faith in physicians and turn to the quack for relief; there may be

a conversion of the unacceptable fear into hysterical symptoms. Recent advances in biochemistry have directed the attention of the physician to the specific factors in the disease. The author pleads that we should not lose sight of the reactions of the organism as a whole.—*D. J. Ingle* (Minnesota).

654. **Notkin, J., Coombs, H. C., & Pike, F. H. Clinical and experimental observations on the Babinski reversal, cardiovascular reactions, respiratory and pupillary changes during the convulsive and post-convulsive stages of general and experimental epilepsy.** *Amer. J. Psychiat.*, 1932, 11, 679–735.—A detailed report of the observations is given. Bibliography.—*S. J. Beck* (Boston Psychopathic Hospital).

655. **Ödegaard, Ö. A case of oculogyric fits in encephalitis accompanied by obsessions and disturbance of ideation.** *Acta psychiat. et neur.*, 1932, 7, 855–865.—In the above article a case of chronic epidemic encephalitis is described, where oculogyric fits were accompanied by stereotyped suicidal obsessions. The obsessions came into evidence only as long as the patient was in a state of emotional tension (marital unhappiness), and their content appeared as a realization of more or less conscious desires. Improvement of the general tonus as well as of mood followed the fits, which were consequently regarded as results of a growing tension (possibly in subcortical centers and due to a relative blocking of subcortico-cortical impulses). An inability to make mental images of even familiar objects and persons, which was also very definite in this patient, may be regarded in the same way. Bibliography.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

656. **Ödegaard, Ö. Emigration and insanity.** *Acta psychiat. et neur.*, 1932, Suppl. IV. Pp. 206.—The author compares a random sampling of the mental hospital population in Norway with one of the Norwegian-born hospital population in Minnesota. The material was carefully corrected for age and sex distribution and decade of admission. It was found that the incidence of mental disease was significantly higher for the emigrants than for those who remained at home. The author then diagnosed practically all cases of both series from the case records and again compared the populations, finding that there were significantly more of the endogenic psychoses among the emigrants; of the endogenic psychoses there were significantly more schizophrenias and slightly fewer affective psychoses (cyclothymia, etc.) It is concluded that the Norwegian population is richer in schizoid elements of personality, and that these are brought out under the stress of the hardships of the new life.—*R. R. Willoughby* (Clark).

657. **Ödegaard, Ö. The psychogalvanic reactivity in affective disorders.** *Brit. J. Med. Psychol.*, 1932, 12, 132–150.—Normal curves of psychogalvanic reactivity show some reactions of high amplitude, definite intervals of rest between reactions, and both positive and negative components. The positive component is produced by increased electric potential on the back of the hand; the negative, by increased potential of the palm. Psychiatric patients in general show decreased and unstable reactivity. Sometimes the positive component is decreased while the negative component has normal strength. Six diagnostic groups are used; normals, organic and toxic psychoses, hysteria, depressions and neuroses, manic excitement, schizophrenia. Within the groups, other factors are considered, such as influence of age and sex, etiological factors, mood and behavior, mental symptoms, somatic symptoms, course and duration. Most disturbance is found in manic, schizophrenic and organic psychoses, least in hysteria. Clinical improvement is accompanied by a very definite return of the psychogalvanic reactivity towards normal. —*E. R. Hilgard* (Yale).

658. **Oliviers, —. Les aliénés délinquants tels qu'ils se présentent à l'asile spécial.** (Delinquent mental patients as presented in the special asylum.) *J. de neur. et de psychiat.*, 1932, 32, 209–233.—The author describes the behavior of certain groups of delinquent mental patients who came under his supervision at the Asylum of Reckheim. Schizophrenic, general paretic and senile patients do not act differently in special institutions for delinquents, and the discussion is therefore restricted to chronic alcoholics, epileptics, mental defectives, the morally insane, paranoiacs, and patients who suffer from prison psychoses. Chronic alcoholics form about 10% of the asylum population; they do not adjust well to institutional life, are characterized by irritability and egotistical tendencies, and do not improve under medical care. Patients suffering from prison psychoses, on the other hand, often leave completely able to resume their places in society. Prison psychoses of course are not a clinical entity, but represent rather the result of an emotional shock to an impaired constitution. These patients suffer especially from delusions of persecution, innocence and accusation. Epileptic delinquents form about 12% of the inmates. They easily become acclimated to the institution, where life is made easier for them, and their condition rapidly improves. The question of how long they should be interned is difficult to answer. Delinquent paranoiacs, on the other hand, do not show any improvement, and their stay at the asylum is always of long duration. As it is impossible to distinguish between harmless and dangerous paranoia, their detention is entirely justified. Mentally deficient persons form about 65% of the population of institutions for delinquents. Most of the mentally disordered mentioned above are mentally deficient as well. They, like the imbecile, are the drudges in the asylum. They do well at domestic and agricultural chores if they like the work, but can rarely learn a profession. The behavior of patients with moral insanity does not change within the asylum walls; they continue their anti-social activities, take advantage of other inmates, have no respect for their families, and are unstable at work. A description of several special cases is given, and the author concludes his article with a plea for more humane surroundings for

delinquent mental patients.—*H. Syz* (New York City).

659. **Penrose, L. S. The blood grouping of Mongolian imbeciles.** *Lancet*, 1932, 222, 394–395.—Distinct racial differences have been observed in regard to the distribution of the 4 blood groups. Others have advanced the theory that the condition known as Mongolian imbecility might result from admixture of Mongolian blood among Europeans. In a study of 166 Mongolian imbeciles the author found that their blood groupings resembled very closely those of a control group of English non-Mongolian defectives and were unlike the groupings characteristic of the Mongolian race.—*D. J. Ingle* (Minnesota).

660. **Ramadier, J., & Caussé, R. Technique des examens vestibulaires en neurologie.** (The technique of vestibular examinations in neurology.) *J. de neur. et de psychiat.*, 1932, 32, 281–299.—The technique of vestibular examinations is discussed as it relates to the diagnosis of endocranial affections. In oto-labyrinthic disorders the symptomatology is rather constant and shows only quantitative variations, while in neurolabyrinthic affections the vestibular manifestations present a great number of modalities. Spontaneous and artifically induced vestibular reactions are discussed and the authors present in detail their methods for the examination of the different types of nystagmus.—*H. Syz* (New York City).

661. **Ranschburg, P., & Schill, E. Ueber Alexie und Agnosie.** (On alexia and agnosia.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 139, 192–240.—Schill gives a clinical description of a case of pure alexia in a male 62 years old. Although the patient understands spoken language and in general can speak correctly himself, he can understand neither written nor printed words. He can write but cannot read his own writings. By tracing the outlines with his finger the patient is able to read kinesthetically, but if the letters are traced in the wrong direction he cannot understand the meaning. Probably there is a diffuse cerebral sclerosis; there are indications that the corpus striatum is involved. Even without anatomical control, there is evidence of a lesion behind the primary visual centers in the optic radiation or in the cuneus. Ranschburg analyzes the case psychoneurologically. He traces the patient's inability to read to an agnosis for complexes of optical figures, and in turn to the quantitative inhibition appearing when attention has to be applied to many details simultaneously. The function of the reading area depends upon the state of the vascular system. Qualitative inhibition (as illustrated in the Ranschburg phenomenon) is likewise important; its physiological bases are harder to ascertain. Ranschburg conjectures that it may be due to a fusion of fields of excitation of two or more processes into one common field.—*C. W. Fox* (Rochester).

662. **Reilly, W. A., & Lisser, H. Laurence-Moon-Biedl syndrome.** *Endocrin.*, 1932, 16, 337–357.—This syndrome is characterized by dystrophia adiposogenitalis, atypical retinitis pigmentosa, mental deficiency, familial occurrence, skeletal abnormalities, polydactylism, and syndactylism. The authors report four additional cases of this rare malady, bringing the total number now described in the literature to 77. The authors have analyzed the data included in the descriptions of the other cases and present their results in tabular form. The frequency with which each symptom has occurred in the total number of cases is indicated. 60 had mental deficiency, 7 did not, and in 11 cases it was not stated. The treatment generally given was the administration of thyroid and pituitary preparations. Improvement in mentality was reported to result from treatment in 9 cases.—*D. J. Ingle* (Minnesota).

663. **Roemer, H. Die Sparprogramme für die offene Gesundheitsfürsorge und die offene Geisteskrankenfürsorge.** (The economy program for health care in the home and extra-mural care of mental patients.) *Zsch. f. psych. Hygiene*, 1932, 5, 47–50.—The author discusses the economy program issued by the German Ministry of the Interior in December, 1931, curtailing various public-health activities, among them extra-mural care of mental patients. Roemer argues that in this time of extraordinary need, health care is more necessary than ever, and that extra-mural care of mental patients is the most rational method of cutting down their expensive institutional treatment.—*M. E. Morse* (Catonsville, Md.).

664. **Rosca, A. Psihopatologia deviaţilor mintali.** (Psychopathology of the morally insane.) Cluj, Rumania: University Institute of Psychology, 1931. Pp. viii + 110. Lei 80.—After giving a definition of mental deviation and pseudo-deviation, aided by an historical survey, the author describes the different methods and institutes, psychological clinics, institutes of corrective education, prisons in Germany, Belgium, Switzerland, Austria, England, America and Rumania, pointing out their importance from the individual and social point of view.—*M. Moldovan* (Bucarest).

665. **Schuch, H. Ist die Aufhebung oder Einschränkung der offenen psychiatrischen Fürsorge eine wirksame Sparmassnahme?** (Is the abolition or limitation of extra-mural care for mental patients really economical?) *Zsch. f. psych. Hygiene*, 1932, 5, 35–47.—By "open" care is meant supervised care of mental patients with their families or relatives, or in selected boarding homes. Schuch presents a series of cases, covering a wide variety of conditions, which show that this method can be successfully and economically carried out. The greatest advantages of extra-mural care, however, are not the financial savings, but the manifold opportunities which it offers for helping the patients and their families in this time of poverty and unemployment. —*M. E. Morse* (Catonsville, Md.).

666. **Shrubsall, F. C., & Williams, A. C. Mental deficiency practice.** London: Univ. London Press, 1932. Pp. vii + 352. 12/6 net.—A practical guide to the methods of diagnosis and prognosis of mental deficiency, and to the legal aspects, both central and local, of mental deficiency problems in England.

Methods of testing are described fully, and there is a representative selection of official forms of the kind in use in England and Scotland today. There are also some discussions of general problems of classification and of the etiology of mental defect.—*F. C. Bartlett* (Cambridge, England).

667. **Spiegel, E. A. Rindenerregung (Auslösung epileptiformer Anfälle) durch Labyrinthreizung: Versuch einer Lokalization der corticalen Labyrinthzentren.** (Cortical excitation (releasing of epileptiform seizures) through labyrinthine stimulation: an attempt to localize the cortical labyrinthine centers.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 138, 178–196.—Experiments with injections of strychnine indicate that labyrinthine excitations enter the temporal lobes by means of extra-cerebellar tracts. If this region is hyper-excited by labyrinthine stimuli, epileptiform convulsions may appear.—*C. W. Fox* (Rochester).

668. **Stähelin, J. E. Psychische Störungen bei der Frau.** (Mental disorders of women.) *Schweiz. Zsch. f. Hyg.*, 1931, 11, 879–890.—There are no mental disturbances peculiar to women, but there are some, e.g., manic-depressive psychoses, to which women are particularly disposed. Peculiarly female traits, repressed in ordinary life, are frequently revealed for the first time in the psychoses, e.g., the primary importance of the affective in women as opposed to the intellectual in men. Women are particularly susceptible to the critical phases of sexual life, menstruation, pregnancy, etc., during which psychoses are most likely to manifest themselves, and are in general governed more completely than men by specifically biological processes.—*R. B. MacLeod* (Cornell).

669. **Strom-Olsen, R. The blood-sugar curve in mental cases.** *Lancet*, 1932, 222, 128–130.—The author reports his observations on the hyperglycemic index of 36 patients recently admitted to the Derby Mental Hospital. It is shown that such factors as undernutrition, endocrine affections (as hyperthyroidism and diabetes mellitus), hepatic and renal insufficiency, cardiovascular degeneration, menstruation, and the emotional state at the time of test play an important part in the production of a high hyperglycemic index. Injection of adrenalin produced an increase in blood sugar. The adrenalinemia in the emotional syndrome may account for the production of the prolonged hyperglycemia present during states of emotional tension.—*D. J. Ingle* (Minnesota).

670. **Symonds, C. P. The effects of injury upon the brain.** *Lancet*, 1932, 222, 820–823.—If the brain injury has been so severe as to produce gross laceration and contusion, death usually occurs within the first two or three days. Such cases provide little opportunity for clinical study. The clinical state from injury to death is that of profound stupor. The group of cases which survive injury offer an interesting but difficult field for investigation. In the clinical condition termed by the author "traumatic stupor" there is clouding of consciousness which persists after the initial complete loss. In the majority of these cases there are no signs of focal damage to the brain. Trotter has advanced the view that this syndrome results from a lessened capillary circulation caused by increased intracranial pressure, which in turn is caused by multiple hemorrhages and edema. Bagley supports an alternative hypothesis that the condition is produced by subarachnoid hemorrhage. The author reports evidence which indicates that both views are untenable, and is led to conclude that traumatic stupor is caused primarily by direct injury to the neural tissue, with subsequent reactive changes. The post-traumatic cerebral syndrome may occur in the convalescent stage after severe injury with traumatic stupor or after a minor injury with or without concussion. In this syndrome vertigo occurs with extreme frequency. It is discussed as a possible sign of indirect injury to the brain stem. Several types of headache may be found in this general post-traumatic state. The problem offered by the occurrence of symptoms after a considerable latent period is also discussed.—*D. J. Ingle* (Minnesota).

671. **Taylor, J., Holmes, G., & Walshe, F. M. R. [Eds.] Selected writings of John Hughlings Jackson. Vol. I: On epilepsy and epileptiform convulsions. Vol. II: Evolution and dissolution of the nervous system; speech; various papers, etc.** London: Hodder & Stoughton, 1931–32.—The editors have assembled all important writings of Jackson in these two volumes. Jackson, one of the founders of modern neuropathology, never published a systematic summary of his ideas. Many of his writings were recorded in small editions which are practically inaccessible, especially to the continental reader. The writings which compose the first volume permit us to follow the entire development of Jackson's thought. This volume is devoted to a consideration of epilepsy and epileptiform convulsions. Jackson considered epileptiform convulsions as "movements resulting from a discharge of the cerebral cortex," which implies that he considered the existence of motor centers probable, even before the experiments of Hitzig and Ferrier with dogs and monkeys proved this fact. The second volume contains "the more philosophic papers," that is, works on the development and disintegration of the nervous system, on speech, and on problems of a general order. His manner of treating the latter reveals best the philosophic nature of Jackson's mentality.—*H. Syz* (New York City).

672. **Tower, L. P. Occupational therapy for mental defectives at Syracuse State School.** *Occup. Therap. & Rehab.*, 1932, 11, 353–359.—Retarded children are better adapted to dealing with concrete material, and this success aids in diminishing inferiority feelings resulting from previous failures in life. Self-confidence is developed as articles are made in the various crafts. Behavior problems who have been unruly in order to catch attention now find satisfaction in the notice which their work receives from adults and companions. Distractible children receive valuable training in attention. The recreational value of occupational therapy is important after the child is paroled from the school. Vocational training, in addition to therapeutic value, prepares

the children for modern wage earning after they get out.—*H. E. Burtt* (Ohio State).

673. **Tramer, —. Geistige Hygiene und Heilpädagogik.** (Mental hygiene and remedial pedagogy.) *Psychol. Rundschau*, 1932, 4, 107–110.—A discussion on the theoretical side of the relationship of these two fields. The author claims that in the days of Hippocrates mental hygiene and psychoanalysis were known. The former field is broader than the latter, and it deals with adults rather than with the maturing mind.—*A. B. Herrig* (Michigan Central State Teachers College).

674. **Van Gehuchten, P., & Gaudissart, P. Hémichoréo-athétose avec troubles oculaires complexes. Syndrome pédonculaire sous rubrique. Discussion du diagnostic.** (Hemichoreo-athetosis with complex ocular disturbances. Peduncular sub-rubral syndrome. Discussion of diagnosis.) *J. de neur. et de psychiat.*, 1932, 32, 300–306.—The case history of a female patient of 47 with right hemichoreo-athetosis, superficial and deep right hemianesthesia including the face, slight right pyramidal signs, total vestibular areflexia, left facial paresis, vertical nystagmiform movements of the eyes, almost complete abolition of lateral eye movements (Foville's bilateral syndrome) and tonicity disturbance of the levator and orbicularis palpebrarum. The author discusses the various diagnoses that suggest themselves in this case; he himself ascribes the symptom complex to a lesion in the superior cerebellar peduncle.—*H. Syz* (New York City).

675. **Vermeylen, G. Délire systématisé au cours d'une rémission prolongée chez une ancienne paralytique générale malarisée.** (Systematized delusions in the course of a prolonged remission of a former general paralytic treated by malaria.) *J. de neur. et de psychiat.*, 1932, 32, 30–33.—The case history of a female patient of 45, who was admitted to the hospital with typical signs of general paralysis. Treatment with malaria was given, whereupon her general state improved while her mental condition remained the same. The patient returned home and improved considerably, finally taking up her previous life in an apparently normal manner. A year later the blood Wasserman became and remained negative. Shortly thereafter her mental state changed completely, the clinical picture being that of a chronic systematized psychosis rather than that of general paralysis. Inasmuch as the serological reactions of blood and spinal fluid were negative, the author posits the question whether we have to deal here with a psychosis which developed from the background of general paralysis after malaria treatment or whether a psychosis occurred independently of the former illness and treatment. In his opinion the former possibility seems more likely.—*H. Syz* (New York City).

676. **Walther, L. Wieviel geistig zurückgebliebene Kinder gibt es im Berner Jura?** (How many retarded children are there in the Berne Jura?) *Psychol. Rundschau*, 1932, 4, 121–123.—A short discussion of the history of mental testing is followed by the results of the use of the Dearborn tests with 7400 children in the Berne Jura. 2.73% fell below 70, in comparison with the tests given to 3000 in Rumania, where 2.77% fell below, and to 9000 in England with 2.89% below. Intelligence quotients below 80 were found in 7.98% elsewhere and in the Berne Jura in 7.82%.—*A. B. Herrig* (Michigan Central State Teachers College).

677. **Weber, H. The psychological factor in migraine.** *Brit. J. Med. Psychol.*, 1932, 12, 151–173.—The case of a married woman aged fifty-six whose migraine was cured by psychological treatment is presented in its relation to various theories of migraine (theory of increased intracranial pressure, vaso-motor theories, metabolic theory, ocular theory, endocrine theory, digestive theory).—*E. R. Hilgard* (Yale).

678. **Wolfensberger, T. P. Ein psychokathartisch behandelter Fall von Hysterie.** (A case of hysteria treated psychocathartically.) *Zentbl. f. Psychotherap.*, 1932, 5, 513–533.—This is a detailed resumé of the case of a 19-year-old student of jurisprudence examined and treated in Burghölzli, Switzerland. On the basis of this case, the author indicates some differences between the psychocathartic and psychoanalytic treatments. The therapeutic procedure, which consisted primarily in encouraging free association under hypnosis, resembled the technique originally used by Breuer. The motives for thefts committed by the patient were discovered, and his pathological attitudes toward urination, masturbation, castration and sexual intercourse seem to have been altered toward the better.—*C. W. Fox* (Rochester).

[See also abstracts 506, 561, 563, 564, 569, 581, 607, 732, 748.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

679. **Arrington, R. E. Some technical aspects of observer reliability as indicated in studies of the "talkies."** *Amer. J. Sociol.*, 1932, 38, 409–417.—The department of social science methodology at the Yale Institute of Human Relations has recently used motion pictures to study technical problems which cannot be solved adequately by data from life situations. Three observers recorded simultaneously the behavior of a given character, noting on mimeographed recording blanks the occurrence of specific items within 5-second intervals. Two aspects of behavior were observed—language and physical contacts with persons. Fourteen films were viewed, each a minimum of eight times. In analysis of the data, adjustment had to be made for discrepancies in the timing of events, caused by inadequately synchronized stop watches and differences in the running-speed of the same films at different times. The self-consistency of observers from observation to observation was noted. Improvement in records caused by practice and training, and the reliability of observers in recording the occurrence and interpreting the nature of events according to predetermined definitions reached the maximum in the third of four observations.—(Courtesy *Amer. J. Sociol.*).

680. **Blonsky, P. P. Schönheit und Unschönheit.** (Beauty and ugliness.) *Arch. f. d. ges. Psychol.*, 1932, 85, 529–558.—In order to find out what beauty is the author gave a questionnaire to a group of 1018 subjects, whose ages ranged from 6 years to adulthood. The first question was, "What do you consider the most beautiful?" 99% of the group answered by saying, flowers, trees, landscapes, works of art, humans. Landscapes become more popular as age increases, while flowers and trees become less popular. The author then considers differences in various answers, e.g., a study of preferences for animate (flowers and animals) and inanimate objects at different age levels. He also studies what kinds of things which are found in nature are considered the most beautiful. He finds that as age increases preferences for forests, parks, and gardens decrease, while preferences for rivers, brooks, and views of the sea increase. Finding that the beautiful was usually a visible situation, the author asked the same question of a group of blind individuals. He found that they preferred music more frequently than the seeing, and the objects of the visible world less frequently. His study includes color preferences of the sexes, studies of what is beautiful in art and in humans, and similar studies of the ugly.—*F. J. Gaudet* (Dana).

681. **Bogardus, E. S. Fundamentals of social psychology.** (2nd ed.) New York: Century, 1931. Pp. xii + 444. $3.50.—The chief changes to be found in this revision are: a more modern terminology, a different organization of chapters, less emphasis upon the instinct doctrine, and occasionally some new material.—*D. Katz* (Princeton).

682. **Brown, F. W. Stuttering: its neuro-physiological basis and probable causation.** *Amer. J. Orthopsychiat.*, 1932, 2, 363–371.—The author claims that "stuttering *may* occur, and so far as anatomical, physiological, and clinical evidence permits us to ascertain, does usually occur on the basis of the *normal* functioning of a *normal* neuro-physiological mechanism," and submits a theory based on Cannon's thalamic theory of emotion. Voluntary speech is primarily an emotional form of expression and is always in danger of interference from lower centers. If emotion is increased beyond a certain intensity, cortical control is liable to be disturbed by impulses from the thalamic region and stuttering results. "Inasmuch as the external, or objective features of the situation are not of themselves capable of producing such an emotional reaction, I conclude that it is produced by internal, or subjective features, which I have designated "emotional conflict," signifying a conflict between the stimulus to speak and a stimulus not to speak."—*H. Peak* (Yale).

683. **Bühring, W. Graphologische Praxis. Lenins Schrift.** (Graphological practice. The handwriting of Lenin.) *Psychol. Rundschau.*, 1932, 4, 130–131.—An analysis is made of Lenin's handwriting, and a relationship is seen with his character features, namely a wise, clear-sighted, energetic personality, tenaciously and cleverly directing a destiny that had involved him.—*A. B. Herrig* (Michigan Central State Teachers College).

684. **Crailsheim, R. F. V. Das Einstellungsproblem und die Kantische Ethik.** (The problem of mental set and Kantian ethics.) *Arch. f. d. ges. Psychol.*, 1932, 85, 351–410.—The author believes that the influence of Kant's early youth upon his religious philosophy has been made clear, but he does not believe that the influence of his early youth has been recognized as a potent factor in his ethical system. After devoting considerable space to Marbe's theory of personality, the author shows the correlation between Kant's early youth and training and his philosophy. He traces the life of Kant from his early youth to the period when he had a system of ethics in its final form.—*F. J. Gaudet* (Dana).

685. **Eager, R., & Fisher, J. W. A case of pseudo-mirror-writing.** *Lancet*, 1932, 222, 876–881.—The case was a domestic servant aged 28. Her history showed treatment for chorea with recovery, later treatment for epilepsy, and a temporary loss of memory. Her performance on the Binet-Simon test indicated that she should be classified as dull or backward. Her manner of reading, writing, drawing, and spelling is the source of interest. Her writing is backward with the letters oriented correctly and written with the right hand in dextrad fashion from left to right. She can read ordinary writing only when it is turned upside down. She draws objects upside down. In spelling she reverses the order of the letters. The case is diagnosed as hysteria. By hypnotherapy the patient was made to perceive, spell, write, and draw normally. Up to the present time it appears that a complete cure has been effected.—*D. J. Ingle* (Minnesota).

686. **Eliasberg, W. Mitteilung. Pathologisches Verhalten im Wirtschaftsleben (Typen und Theorien).** (Communication. Pathological behavior in economic life; types and theories.) *Zsch. f. angew. Psychol.*, 1932, 41, 508–509.—Between economics and individual psychopathology there is a reciprocal relation: the pathological individuals disturb the economic processes and the latter frequently provoke the psychopathological occurrence or at least determine its content and course. The relationships of specific mental and emotional disorders to types of work motivation are discussed.—*M. F. Martin* (West Springfield, Mass.).

687. **Fetscher, R. Kriminalbiologische Erfahrungen an Sexualverbrechern. 2. Das Schriftbild der Sexualverbrecher.** (Criminal-biological observations on sex offenders. 2. The handwriting of the sex offender.) *Zsch. f. Sex.-wiss. u. Sex.-pol.*, 1931, 18, 265–274.—In the previous article (see V: 1948) the author separated his cases into three age groups: the young, the middle-aged, and the senile. 100 cases from each group were investigated as to various characteristics of handwriting, and compared with a group of 100 "normals" chosen at random from the author's personal correspondents. In certain traits the middle-aged offenders resembled the normal group more than they did the "young" or the "se-

nile" groups: regularity of writing, angular N's, "accent" (large capitals, underlining, etc.), less care in straight lines, less tendency to remove pen from paper in the middle of a word. On the other hand the sex offenders showed definite differences from the normal in size of writing, lack of shading, relation of width to height of letters, degree of slant, connecting of letters. There are no conclusions as to the possible application of the information to criminology.—*H. Marshall* (Stanford).

688. **Freund, H. Inneres Stottern und Einstellbewegung.** (Inner stuttering and movements of set.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 138, 104–108.—In the mental states preceding and producing stuttering, conceptual, affective, psychotic and neurotic elements are inseparably interwoven. Hearing words in inner speech as a measure of precaution is an important part of the "stuttering complex." Numerous observations of intelligent stutterers indicate that the pre-experienced difficulty of a sound depends to a large extent upon the perception of movements (as in the larynx) excited by a vivid imagination or upon the perception of organic sensations brought about by it. Practical applications are discussed briefly.—*C. W. Fox* (Rochester).

689. **Gardiner, A. H. The theory of speech and language.** New York: Oxford Univ. Press, 1932. Pp. x + 332. $3.00.—The author has developed a theory of speech which stresses the fact that speech is no bilateral affair consisting of articulate sounds as distinct from meaning, but is really quadrilateral, requiring a speaker, listener, words, and things to be spoken about. The speech arises from a desire of a speaker to acquaint a listener with the "thing-meant." The listener must think as actively as the speaker and must draw upon his past experiences with the speech symbol to identify his thinking with that of the speaker. Words in themselves do not mean anything, although they may represent sentences when supplemented by figures of speech, gesture, or past experience on the part of listener and speaker. Word-function is "the work which a spoken word has to perform in order to present the thing meant by the speaker in the formal character in which he must be supposed to have intended the listeners to see it." Word-function is distinguished from word-form, which the author discusses in reference to syntax, grammar, and the internal and external attributes of the word. The sentence, not the word, is the unit of actual speech and differs from language because it is language meaningfully applied to some state of things and purposely addressed to some listener. Speech is elastic, so that two sentences with the same words may have entirely different meanings, depending on the various factors concerned, such as sentence form, word order, meaning of silence, and the uses of various parts of speech. The book contains detailed discussions and illustrations of these various points. These are largely based on examples found in the English language, although other languages are freely drawn upon. The author compares his theories with those of others, particularly Jespersen, Ries and Wundt.—*L. S. Selling* (Institute for Juvenile Research).

690. **Gist, N. P. Racial attitudes in the press.** *Sociol. & Soc. Res.*, 1932, 17, 25–36.—Certain racial attitudes are revealed in articles appearing in white and negro newspapers throughout the country. Such attitudes include the "white-supremacy," "retaliation," and "criminal-negro" attitudes on the part of the whites. The negroes show attitudes of "resentment" and "exultation." At the same time there is a recognition that attitudes of racial prejudice and antipathy are often superseded by those of friendliness and good-will. The author questions whether the press, in reflecting racial attitudes, serves as a barometer of racial antipathy and racial good-will. If the press helps to perpetuate attitudes it must be considered an important factor in race relations and needs scientific investigation.—*J. R. Hilgard* (Yale).

691. **Grudin, L. Mr. Eliot among the nightingales.** New York: Covici Friede, 1932. Pp. 71. $1.00.—This essay, written in reply to Eliot's *Poetry and Propaganda*, shows the impropriety of the habit of logical animism by which he reasons and the dialectical irresponsibility which enables him to speak as a critic at one moment, as a poet at another, and as a convert at still another. "Such a procedure can never reveal anything decisive or solve a radical problem, for to yield this result would require *a new instrument.*" The fact that criticism is an art does not imply that it should be poetical. "The writing of poetry and the writing of literary criticism differ both in object and instrument." The questions raised by Eliot are problems of language and symbolization. Critics suffer who fail to discern the linguistic aspects of their problems.—*M. P. Montgomery* (Faribault, Minn.).

692. **Guttmann, A. Das Tempo und seine Variationsbreite.** (Tempo and its range of variation.) *Arch. f. d. ges. Psychol.*, 1932, 85, 331–350.—The author has studied the range of variation in tempo of various types of music and the factors which influence this range. He finds that the influence of the material, the written music, is stronger than the particular tempo of the individual and if the individual attempts to impose his personal tempo upon the music to too great an extent the piece is distorted. Although some conductors are extremely constant, fluctuations in tempo are considerable. The author finds that there are two types of conductors, the slow and the fast. The author finds the range of individual differences to be greater in the beginnings of symphonies than in their conclusions.—*F. J. Gaudet* (Dana).

693. **Hartshorne, H. Character in human relations.** New York: Scribners, 1932. Pp. xiv + 367. $2.50.—Many of the plans and methods which have been proposed for character education are briefly described and critically evaluated. The theories of character are discussed under five headings: the trait theories, the habit theories, the pattern theories, the factor theories, and the self theories. The

last half of the book is devoted to a discussion of the author's own interpretation of what character is and of how it may best be improved. Character is looked upon as integration, "as the art of living . . . as a way of behavior which takes into consideration the far-reaching implications and consequences of actions, deriving joy and confidence from successful and meaningful participation in all the relationships of life."—*V. Jones* (Clark).

694. **Herbertz, H. Kriminalpsychologische Praxis. Der Fall Georg Klein.** (The practice of criminal psychology. The case of George Klein.) *Psychol. Rundschau*, 1932, 4, 124–127.—In commenting on the triple murder case of Georg Klein of Troitschendorf (Oberlausitz), the author uses Aristotle's classification of crime: *hamartema*, self-protecting and self-excusing crime, and *adikema*, intentional crime. He sees in the case cited an example of the former, and sees a need of dealing with cases according to a classification along these lines.—*A. B. Herrig* (Michigan Central State Teachers College).

695. **Hild, H. Sprachkrankenfürsorge in Haus und Schule.** (Treatment of speech defects at home and in the school room.) Camberg, Nassau: Author, 1930. Pp. 90. RM. 2.85.—From the preface: "The pedagogical process of treating speech defects has taken a decided upward turn recently. This book will supplement this still young science from the standpoint of school practice. The conclusions throughout are arrived at in a scientific manner, notwithstanding which they are expressed in such fashion that they are comprehensible to the laity." The table of contents: speech and speech disturbances; normal speech—foundation of normal speech; inhibition of speech; developmental hesitation and the cultivation of speech habits; stuttering; stammering; speaking through the nose; noisiness; agrammatism; voice disturbance; idiopathic dumbness (without deafness); speechlessness; sign language; treatment of speech defects and its practical application; the therapist; speech hesitation in the primary school; special education of the speech handicapped; schools for the hard of hearing; education of the totally deaf; treatment of idiopathic dumbness (without deafness); provisions for the treatment of speech defects among children in rural districts; frequency of speech defects; institutions for deaf and dumb and handicapped children from rural districts; loss of hearing and vocational training; care of handicapped adolescents, etc. The author seeks to give to parents, the teaching profession generally, and especially those who have charge of public institutions for the dumb, an insight into the development of speech, the nature of speech defects, and the intellectual, social, and vocational needs of the handicapped adult.—*K. Meister* (Camberg).

696. **Hild, H. Merkblatt über Sprachgebrechen und Beschulung sprachgehemmter Kinder.** (Comments on the nature of the defects and the training of speech-handicapped children.) Camberg, Nassau: Author, 1930. Pp. 4. 20 copies, RM. 2.—The article consists of a generally comprehensible note on speech defects and speech training for all types of parents and for the entire teaching profession. The speech errors in the nursery which may lay the foundation for defects are cited. Likewise the article gives parents hints on the schooling of their charges. —*K. Meister* (Camberg).

697. **Jancke, H. Zur Charakteristik Goethes.** (*A contribution to the character of Goethe.*) *Psychol. Rundschau*, 1932, 4, 116–121.—Goethe's anniversary year appears in a period when nihilistic tendencies must be met. To present Goethe's philosophy as a Platonic ideal has no value in our time. In his day and ours there are facts of life to deal with. The struggle of self-preservation involves both a self and an objective world, which have to be brought into harmony. This is a discussion of the life philosophy of Goethe.—*A. B. Herrig* (Michigan Central State Teachers College).

698. **Kirkpatrick, T. P. C. A note on the history of the care of the insane in Ireland.** Dublin: University Press, 1931. Pp. 43.—This monograph describes the methods of treatment of the insane adopted in Ireland from very early times to the end of the nineteenth century. A bibliography is included.—*F. C. Bartlett* (Cambridge, England).

699. **Luckmidas, K. R. Modern India thinks. A symposium of suggestions on problems of modern India.** Bombay: Tarporevala, 1932. Pp. xix + 298. Rs. 6/-.—A compilation consisting of a very large number of extracts from recent Indian and other writings dealing with general problems of contemporary civilization. There is an appreciative foreword, with some interpretation of the general trend of thought exhibited in the extracts, written by Kanaivalal H. Vakil.—*F. C. Bartlett* (Cambridge, England).

700. **McKerrow, J. C. An introduction to pneumatology.** London: Longmans, Green, 1932. Pp. 179. 6/- net.—By "pneumatology" the author understands the scientific study of man as a spiritual being. Hence his book would more commonly be called an essay in the psychology of religion. It is maintained that spiritual man has "emerged" largely as a result of a growing suspicion of the futility of reason, and an attempt is made to discuss the processes involved in this "emergence." The book then considers, rather in a general sense than by concrete studies, the phenomena of the pathology of religion, of revelation, of contrition, and of intention. The last term is used in a theological sense, as a name to indicate a spring of action which has no non-spiritual character.—*F. C. Bartlett* (Cambridge, England).

701. **Moore, L. H. Leadership traits of college women.** *Sociol. & Soc. Res.*, 1932, 17, 44–54.—A study by the questionnaire method of the characteristics possessed by student leaders in the Texas State College for Women revealed certain traits such as friendliness, sympathy, dignity, fairness, initiative, predominating. These probably arise through the needs of the group, and the author relates them to Bogardus' concept of the "marginally unique." The

students learned to recognize the same or similar personality traits in their leaders, and to judge with a high degree of reliability the extent to which specific leaders possessed certain of these characteristics.—*J. R. Hilgard* (Yale).

702. **Noack, V. Das soziale Sexualverbrechen.** (Social sex crimes.) Stuttgart: Puttmann, 1932. Pp. 80. M. 1.50.—*R. R. Willoughby* (Clark).

703. **Pailthorpe, G. W. What we put in prison.** London: Williams & Norgate, 1932. Pp. 159. 5/- net.—Part I gives a historical account of social reactions against the criminal, bringing out clearly the change that has accompanied the gradual growth of more psychological points of view. Part II gives in detail the case histories of 20 selected cases of delinquent women studied by the author. Part III discusses suggested necessary reforms of the modern penal systems, having particularly in view the findings of the psychological study of criminal tendencies.—*F. C. Bartlett* (Cambridge, England).

704. **Pailthorpe, G. W. Studies in the psychology of delinquency.** *Med. Res. Council, Spec. Rep. Ser.*, 1932, No. 170. Pp. 113. 2/- net.—100 delinquent women who have been sent to prison are studied in detail, by means of "tests," personal interviews, and the careful collection of general information. They are classified in three overlapping groups, viz., the defective group, the psychopathological group, and the adapted group. The psychopathological group is further divided into the "mental conflict" group and the psychotic group. Selected case histories are given in detail, these being very nearly identical with those given in the same author's *What We Put in Prison*. Detailed recommendations for the more reasonable treatment of offenders are given. An appendix gives some account of contemporary continental experiments and methods of treatment.—*F. C. Bartlett* (Cambridge, England).

705. **Preston, K., Schwankl, H. P., & Tinker, M. A. The effect of variations in color of print and background on legibility.** *J. Gen. Psychol.*, 1932, 6, 459–461.—A study was made of the farthest distance from the eyes at which five-letter words could be accurately read. It was found that the greater the luminosity difference between the word and the background the greater was the legibility.—*H. Cason* (Wisconsin).

706. **Radin, P. Social anthropology.** New York: McGraw-Hill, 1932. Pp. 444. $3.50.—After an introduction setting forth and criticizing the various ethnological theories which have been proposed, the author presents a series of sections each treating a major phase of human activity, e.g., economics, religion, law, etc. Each of these sections comprises several chapters, each presenting the data from a single people in respect to the topic considered, and all arranged in increasing order of complexity of development. The book is terminated by maps and bibliography.—*R. R. Willoughby* (Clark).

707. **Radulescu-Motru, C. Vocatia, factor hotărîtor în cultura popoarelor.** (Genius as a determining factor in the life of peoples.) Bucarest: Casa Scoalelor, 1932. Pp. 151. Lei 40.—Genius is rare, and so should be carefully fostered by educators. Its determination is obscure, but appears to arise from the deeper levels of the personality. For full realization it should be integrated with social objectives of permanent value. Genius may be purely innate, or to some extent acquired. To this extent there may be a pedagogy of genius, and it is in this field that the teacher should find his greatest social significance. Geniuses of all peoples bear the impress of the particular culture which helped to form them, and this culture in turn is preserved and developed by the genius.—*M. Moldovan* (Bucarest).

708. **Sears, L. Responsibility.** New York: Columbia Univ. Press, 1932. Pp. xii + 198. $2.50.—The book is divided into three parts. First, a presentation is given of the philosophical theories of Bentham, Mill, Bain, Westermarck, Green, Bradley, and Dewey as regards the meaning of responsibility and the development of it in their respective systems. Second, abstracts are given of twelve case histories of problem children who have been examined and treated by child guidance clinics. Third, the more practical outcomes of the theories propounded in the first part are re-examined in light of the analyses and attempted solutions described in the case studies. The fundamental thesis back of the organization of the book is that "no merely logical analysis of an ethical situation is adequate unless there is added an empirical examination of the facts, and a testing of the conclusions."—*V. Jones* (Clark).

709. **Steinberg, W. Soziale Seelenhaltungen.** (Social mental attitudes.) Munich: Reinhardt, 1932. Pp. 151. M. 3.40.—*R. R. Willoughby* (Clark).

710. **Stolz, K. R. Pastoral psychology.** Nashville, Tenn.: Cokesbury Press, 1932. Pp. 259. $2.00.—The book is written primarily for pastors to help them in their work with individuals. It is maintained that religion should be the central experience of the individual—inspiring, organizing, and unifying; that "the Christian religion is the progressive integration of personality with a dynamic sense of ultimate reality." The presentation of personality development in childhood, adolescence, and adulthood is in terms of the dynamic nature of suggestion, imagination, imitation, and the desires for recognition, response, new experience, and security; there are included also chapters on *Motives for Personality Changes* and *Religion as a Rallying Center*. The last half of the book discusses such causes of disturbances as the complex, fear, inferiority disposition, and sexual conflicts; the protective responses, as compensation, identification, projection, transference, and rationalization; diagnostic methods; and relief through talk, adjustment to reality, prayer and worship, and pastoral counseling. Selected bibliography and index.—*A. G. Reynolds* (Winchester, Mass.).

711. **Störring, G. Gutachten in dem Halsmann-Prozess.** (Opinion in the Halsmann case.) *Arch. f. d. ges. Psychol.*, 1932, 84, 372–386.—Young Halsmann, on trial for the murder of his father, gave

testimony which was inconsistent with itself and was further disproved by that of other witnesses. The author here shows in detail how, assuming the young man to be innocent of the murder, he might have given the untrue testimony in the mistaken belief that it was the truth. The mechanisms of illusions of perception and memory and pseudo-hallucinations (in so far as they might apply to this case) are here explained. The author also reviews the literature concerning parricides and shows that the character of young Halsmann differed markedly from that of the typical parricide, and that it would be inconceivable that this particular youth should murder his father unless he were in a pathological twilight state. A diagram, portraying the scene of the crime, elucidates the author's theories as to how it occurred.—*M. F. Martin* (West Springfield, Mass.).

712. **Telford, C. W. Test performance of full and mixed-blood North Dakota Indians.** *J. Comp. Psychol.*, 1932, 14, 123–145.—225 Indian pupils scattered through the kindergarten to the sixth grade, inclusive, were given the Goodenough intelligence test. The average IQ of the Indian children was 88, as compared with 100 for whites and 77–79 for negroes. The rational learning test, the mare and foal test, and the Healy puzzle "A" test were given to 35 12-year-olds. The Indians were superior to whites on the mare and foal test. On the Healy "A" test they were intermediate between whites and negroes. This was true for the rational learning test. The differences between Indians and whites were greater for speed than accuracy. There was no correlation of any significance between performance and amount of Indian blood. Bibliography.—*N. L. Munn* (Pittsburgh).

713. **Thrasher, F. M. Ecological aspects of the boys' club study.** *J. Educ. Sociol.*, 1932, 6, 52–58.—This is a brief description of the method of construction, data included, and uses of maps showing the geographic distribution of various types of social facts in relation to their backgrounds and to each other. Such maps covering an area of some 200 city blocks are now available for teaching purposes.—*F. D. McTeer* (Detroit City College).

714. **Walther, A. Social classes in modern Germany.** *Sociol. & Soc. Res.*, 1932, 17, 3–15.—A general discussion of the various classes in Germany such as the peasant, nobility, Junker, officer, official, and employee, with an analysis of the differentiations in organization of life, traditions, and code of conduct. —*J. R. Hilgard* (Yale).

715. **Weichbrodt, M. Tactual compared with visual discrimination of consonantal qualities.** *J. Gen. Psychol.*, 1932, 6, 203–206.—A comparative study was made of visual stimulation alone (of a lip-reader) with tactual stimulation alone as means of discriminating members of pairs of consonantal qualities following long *e*. The advantage which Gault found of simultaneous visual-tactual stimulation over single visual stimulation may have been partly due to the additional clues afforded by the sense of touch. —*H. Cason* (Wisconsin).

716. **Westermarck, E. Early beliefs and their social influence.** London: Macmillan, 1932. Pp. 182. 7/6 net.—Religion and magic are distinguished, and the influence of customs and beliefs connected with both upon various departments of early social life is traced. The particular departments of life dealt with are: respect for private property, and charity; hospitality and the right of sanctuary; the subjection of children, regard for truth, the oath; the ordeal and the growth of public justice; duties to gods; marriage and sex relations, and the position of women. In connection with each problem a mass of evidence, drawn from many different social organizations, is marshaled. The enormous influence of belief and custom on social practice is demonstrated.—*F. C. Bartlett* (Cambridge, England).

717. **Willemse, W. A. Constitution-types in delinquency. Practical applications and bio-physiological foundations of Kretschmer's types.** New York: Harcourt, Brace, 1932. Pp. viii + 266. $4.00. —A constitution-typological study was made of 189 white boys aged 16 to 22 in 3 South African reformatories. The purposes are (1) to establish the manner of manifestation of autism, perseveration, insensitivity, etc., in the mental dispositions and functions connected with crime (especially from the bio-typological viewpoint, so as not to replace or refute the works of Healy, Cyril Burt, et al.), (2) to coordinate the typologies of Jaensch, Pende, Berman, and Wiersma with that of Kretschmer in so far as they have similar underlying principles. The methods and materials include interpretive observations during a month or more of acquaintance, case history, subject's letters, interview, ergogram, Rorschach test, Bourdon concentration test, subject's induced drawing, and anthropometric measures, observations, and photographs. Boys of leptosome body type constitute the schizo-type. They show such asthenic mental qualities as lack of energy, susceptibility to influence, timidity, cowardly acts, etc., and such autism as is revealed in solitary acts, self-conscious compensations, silent scheming, and sexual maladjustments. Biological affinity is indicated between the athletic constitution and epilepsy. The "driven-bound" epileptoid polarity of Delbrück is a plausible hypothesis. Among the pyknics the hypomanic variants of the cyclo-type are constitutionally related to athletics. Jovial optimists and sociable enjoyers are uninterruptedly connected with the querulants and self-feeling cholerics, and with the undaunted adventurers, gang-leaders, and changeful, rough "whole-hoggers." They usually have athletic physical qualities as well, but they may perhaps be more dominated by the thyroid, while the latter may be more adrenal cortex centered, the author concludes. The dysplastics are of extreme importance for delinquency. There are chapters on aims, types of physique, methods, the mental side of the schizo-type, psychical (including delinquent) characteristics of athletics, mental qualities of pyknics and of dysplastic types, coordination with other type studies, and bio-physiological bases of type differences. Body types are illustrated with many photographs.

An average is given for each of 26 anthropometric measures and 5 indices for each of the 3 main types. The book has 32 plates, 14 diagrams, an itemized table of contents, and no index.—*C. R. Garvey* (Yale).

718. **Williams, F. E. Sex affiliation and its implications.** *J. Roy. Anthrop. Instit. Great Britain and Ireland,* 1932, **62**, 51–81.—By sex affiliation is meant a mode of social organization according to which male children are classed with the father's group and female children, for various purposes, with the mother's group. The author found this among the Koiari-speaking people of the central division of Papua. In this paper he discusses the implications of the system in relation to a number of social functions and to general social organization. —*F. C. Bartlett* (Cambridge, England).

719. **Willoughby, W. C. Nature-worship and taboo.** Hartford: Hartford Seminary Press, 1932. Pp. x + 293. $4.00.—The author adds to material from the literature on beliefs and customs of the Bantu his own observations and interpretive comments. He suggests that nature-worship may be due to the associations of certain localities with traditions of culture heroes. He points out the connection of taboo with magic and suggests practical attitudes toward it, but is not prepared fully to evaluate it in advance of a forthcoming work treating magic more in detail.—*R. R. Willoughby* (Clark).

[See also abstracts 501, 504, 580, 581, 589, 597, 601, 628, 645, 648, 656, 728, 735, 736, 737, 745, 754, 766, 772, 774.]

INDUSTRIAL AND PERSONNEL PROBLEMS

720. **Manoil, A. Problema prevenirii accidentelor de muncă.** (The problem of industrial accident prevention.) Bucarest: Luceafarul, 1931. Pp. 50. Lei 100.—This problem begins with the practical interest of Taylor, and continues with the human interest of psychotechnics. Accident causes can be psychological, physiological and physical; the author lays emphasis upon the psychological one. He studies 4500 cases, 800 of which, being fatal, are in the files of the Social Assurance Company of Bucarest. Reasoning from several correlations between accidents and sex, age, season, day, hour, job, etc., he indicates the remedies suggested by the analysis. Statistics, safety placards, laboratories, and weekly safety courses can decrease the number of accidents by 50%.—*M. Moldovan* (Bucarest).

721. **Moldovan, M. Dinamica muncii.** (The dynamics of work.) Bucarest: Bucovina, 1931. Pp. 208. Lei 150.—Work is not instinctive, but on the contrary represents a conquest, motivated by necessity, of an innate disinclination to discomfort. After a short history of work the author indicates the great importance of modern psychotechnics. In the second part of the work the integration between the individual volitional activity and the objectives of society is treated. Part III is concerned with the influence of work on personality, and the concluding part is a genetic study of work.—*M. Moldovan* (Bucarest).

722. **Valentiner, T. Ueber die Erhöhung des prognostischen Wertes der Eignungsprüfungen.** (Concerning the raising of the prognostic value of aptitude tests.) *Zsch. f. angew. Psychol.,* 1932, **41**, 499–507.—The author translated the results of psychological aptitude tests into terms that would be comprehensible to teachers and foremen, and checked up his own predictions by reports of the actual performance of those he had tested under every-day conditions on the job. Each discrepancy in each individual subject was carefully studied. As a result, he was able to increase very greatly the prognostic value of his tests.—*M. F. Martin* (West Springfield, Mass.).

723. **Welch, H. J., & Myers, C. S. Ten years of industrial psychology: an account of the first decade of the national institute of industrial psychology.** London: Pitman, 1932. Pp. ix + 146. 6/- net.—The British National Institute of Industrial Psychology was founded in 1921, due to the endeavors of the authors. Since that time it has made regular and rapid progress, and the story of its advance and of its many activities is related in this book. Photographs of its present president, its principal, its chairman, and its director are included, and several other illustrations depict some of its investigators at work. The work is investigatory, involving direct study of concrete problems in particular industries; research, dealing largely, but not exclusively, with problems of vocational guidance and selection; and "charitable," concerning problems of an industrial nature which have to be met by hospitals and similar institutions.—*F. C. Bartlett* (Cambridge, England).

724. **Weston, H. C., & Adams, S. The effects of noise on the performance of weavers.** *Indus. Health Res. Board,* 1932, Rep. No. 65. Pp. 38–62. 1/3 net. —An account is given of experiments carried out in a weaving shed. An appreciable reduction of loom noise was effected by means of specially constructed "ear defenders," and a selected group of weavers was observed throughout a period of 26 weeks. Reduction of noise appeared to bring about an average hourly increase of output per weaver of approximately 1%. This increase was greatest during the early stages of the day's work, and it is hence suggested that "even after years of work in a noisy environment, the worker does not become completely adapted or acclimatized to noise, but goes through the process of adaptation daily."—*F. C. Bartlett* (Cambridge, England).

[See also abstracts 386, 725, 765, 775.]

CHILDHOOD AND ADOLESCENCE

725. **Anderson, W. A. Some social factors associated with the vocational choices of college men.** *J. Educ. Sociol.,* 1932, **6**, 100–113.—The data for this study were secured from 673 men students of the North Carolina State College; 63% of these students state that they have chosen a vocation, but only 50%

state the specific type of work which they expect to follow. Whereas 41% have fathers who are farmers, only 12% of the sons plan to go into agriculture; 23% of the students plan to go into engineering, although practically no fathers are in this field. Only one son in eight selected the occupation of his father as his own life work; almost half of the students (45%) desire to shift their residence from the place in which they were reared: 62% of the town and country boys want to work in the city, while 15% of the city boys expressed a wish to work in the open country. About one student in ten is influenced in his choice of a vocation by the suggestions of his parents. Neither the major industry nor the occupation of the leading citizen of the community seems to be a significant factor in determining the vocational choices of boys in that community. The reasons most frequently stated for selecting a given occupation emphasize interest and opportunity in the work.—*F. D. McTeer* (Detroit City College).

726. **Baumgarten, F. Der Werdegang eines Wunderkindes (nebst einem Beitrag über die Beziehung des Gedächtnisses zur Begabung).** (The development of a gifted child; with a contribution on the relation of memory to talent.) *Zsch. f. angew. Psychol.*, 1932, 41, 473–498.—The young orchestra conductor, Rio Gebhardt, reported to the writer his early childhood and submitted to several psychological tests. His father and mother were connected with a theater at Monte Carlo. When he was four years old, his parents missed him momentarily and found him directing a gypsy orchestra before an amazed and admiring crowd. His father then began training him, with the aid of a phonograph. The first lessons were a pleasure; after repeated failures to direct certain passages correctly the little boy wanted to give up, but his father sternly compelled him to continue. Soon he was ready for his first professional appearance as orchestra director at the Folies Bergères in Paris. He subsequently toured South America, Russia, England, France, etc. He was enormously popular, received recognition from several great musicians, and aroused the envy of others. When he was sixteen, his career as gifted child was suddenly over, because he was nearly grown. He believes that this sudden cessation of public acclaim causes many gifted children either to break down or to enter an entirely different profession. Enforced retirement at adolescence ushers in the hardest and bitterest period of their lives. The encouragement of certain older musicians saved Gebhardt from throwing away his genius, though as he grew toward maturity the envy of older conductors made it increasingly difficult to get engagements as guest conductor. After a hard struggle, he finally worked his way up to the point where he regained recognition as an accomplished musician. His extraordinary musical memory has amazed critics since early childhood. Psychological tests (reported in detail) show that outside the field of music his memory is poor. Great special talent is therefore compatible with poor general memory.—*M. F. Martin* (West Springfield, Mass.).

727. **Bieri, E. Ein Beitrag zur Kenntnis der geistigen Entwicklung des taubstummen Schulkindes.** (A contribution to the understanding of the mental development of the deaf and dumb school child.) Zürich: Leemann, 1931. Pp. 86. 3 fr.—Bieri shows that the deaf and dumb child passes through the same developmental stages as does the hearing child. Intellectual development manifests itself in the fact that at first comprehension is limited, individual, and attached to real objects; in the course of school life, with the broadening and deepening of comprehension, new relationships are developed and recognized. A comparison with the development of normal school children shows a marked retardation both in the life pattern and in the comprehension of space, number, and objects. The intellectual life of the deaf and dumb child is reduced qualitatively and quantitatively primarily because of the lack of speech. The value of speech to the development of intellectual life is shown by the dependence of the higher mental functions on speech for the elaboration of the intuitively reached assumptions through an increasingly inclusive and far-reaching system of meaning to a logical result. The fact that with the acquisition of speech the performance curve rises sharply, and that with increasing speech mastery the curve continues to approach, but never reaches, that of the normal child, shows the immense educational value of speech. Consequently we are offered an opportunity to reduce to a minimum the handicap of dumbness by early, extensive and intensive speech training, and thus to assist each individual thus disinherited by fate to a development sufficient to afford him participation as a self-sufficient member of society. This possibility will be realized when on the basis of this insight into the course of intellectual development the proper steps are taken: effort from the kindergarten period; an extension of the school time to nine years, and further education in continuation schools.—*R. Honegger.*

728. **Bowman, L. E. The moral world of the child.** *Rel. Educ.*, 1932, 27, 689–696.—This is a condensed review of studies and methods relative to the moral culture of the child. Great weight is given to the physical and especially the social environment as character influences. The idea is emphasized that generally helpful and sympathetic surroundings without too much dictation or the imposing of too mature ideals upon the child afford the best conditions for normal growth. Religious development is arrived at incidentally when normal all-round development is properly fostered. This point of view is especially commended to parents.—*J. P. Hylan* (Stoneham, Mass.).

729. **Bühler, C. [Ed.] Jugendtagebuch und Lebenslauf. Zwei Mädchentagebücher mit einer Einleitung.** *Quellen u. Stud. z. Jugendkd.*, 1932, Heft 9. (Adolescent diary and later career. Two diaries of young girls, with an introduction.) Pp. 261. RM. 10.—The main contents of the volume consist of two diaries, which have been edited from the standpoint of the agreement between adolescent development

and later course of life. The authors are two young women of well-bred families in a north German city, born between 1890 and 1900. In the detailed introduction the new attitude toward the material is conveyed. After a brief sketch of adolescent development as it is unfolded in the diaries, there follows a brief description of the later life up to the present time on the basis of objective data and material gathered from letters from the authors regarding their later development. A comparison of the documents shows great similarity between the personality, the adolescent promise, and the later life of the two young women. At the mid-point of adolescence in both cases there appears a voluntary molding of self toward an ideal embodied in the personality of a passionately adored woman; later life brings the result in a self-chosen occupation, marriage, and children as a carrying out of the occupational activity. Examination of the course of the tendencies and dominant drives appearing in adolescence shows that some remain characteristic and constant during the entire period under consideration, others proved more temporary, appearing at certain times and later disappearing. In both of the cases under consideration is shown the development of enthusiasm, of religious questioning, of the critical examination of economic values, of sexual urges, and of a period in which real interests and the tendency toward displaying femininity along with occupational activity are to be recognized as constant, characteristic landmarks. The examples show that by similar examination of the diaries and later life of other cases the preponderant temporary tendencies can be differentiated from permanent character traits, and the changing drives can be separated from the lasting ones.—*M. Mandry* (University of Vienna).

730. **Castner, B. M. The development of fine prehension in infancy.** *Genet. Psychol. Monog.*, 1932, 12, 105–193.—By analysis of moving pictures of 59 children the author studied the development of fine prehension in infants during the first year of life. The subjects were of Teutonic or Celtic stock, and the family background is suggestive of an average level of intelligence. With respect to age there were 10 reactors each at 20, 32, 36, 44, and 52 weeks, and 9 at 28 weeks. Fine prehension, "the ability to pick up and hold objects of small size, requiring the smooth coordination of arm, hand, and finger movement and the cooperation of a relatively good quality of visual attention," was studied in responses made to a white pellet, 7 mm. in diameter, which was presented under standardized conditions. Analysis of responses was made in terms of (1) regard for the stimulus object, (2) the approach to it, and (3) the closure of the hand directed toward securing it. The following observations were made: (1) a relative increase, from age to age, in number of regards directed towards the pellet, in comparison with other objects of attention; (2) increase in duration of the individual regards; (3) increase in number of regards accompanied by a prehensory response to the pellet; (4) three types of regard for the pellet—transient, brief, and prolonged; (5) transient regard is seldom accompanied by approach or increased activity at 20 weeks, but is occasionally so accompanied at 28 and 32 weeks; (6) brief regard represents the median length of regard for all ages above 20 weeks and is almost always accompanied by efforts at prehension; (7) at 20 weeks, most regards for the pellet are transient and unaccompanied by approach, but at 28 weeks, there are fewer and longer regards although the prevailing type is still transient; from 32 to 44 weeks, duration of regard continues to increase with increased efforts toward securing the pellet and increased success in securing it, and by 52 weeks regard, in itself, is no longer significant; (8) development of approach to the pellet is characterized by an increase from 30% accuracy at 20 weeks to practically 100% at 32 weeks, by an increasing tendency for the path of approach to approximate a straight line, by a change in the characteristic form of approach from the loop to the planing type, and by increased duration of approach with increasing success in obtaining the pellet; (9) four main types mark the developmental stages in the maturity of this response; whole-hand closure, palmar prehension, the scissors closure, and the pincer type; (10) the pincer type of prehension prevails by 52 weeks; (11) considerable difficulty in holding the pellet after it has been secured is evidenced in all age groups below 52 weeks. This monograph includes a review of the literature and a bibliography of 36 titles.—*M. V. Louden* (Pittsburgh).

731. **Fisher, D. F. C., & Gruenberg, S. M. Our children; a handbook for parents.** New York: Viking, 1932. Pp. 357. $2.75.—*R. R. Willoughby* (Clark).

732. **Freistadt-Lederer, A. Das dumme Kind. Ist Dummheit heilbar?** (The stupid child. Is stupidity curable?) *Psychol. Rundschau*, 1932, 4, 128–130.—The author classifies stupid children as those who through physical ailment are dull, and those who have been made so through conditioning by parents and others. She gives several illustrations of the latter type of case in which the stupidity is revealed as a mask for inferiority feelings.—*A. B. Herrig* (Michigan Central State Teachers College).

733. **Gruenberg, B. C. Parents and sex education; for parents of young children.** (3rd ed.) New York: Viking, 1932. Pp. 120. $1.00.—*R. R. Willoughby* (Clark).

734. **Halverson, H. M. A further study of grasping.** *J. Gen. Psychol.*, 1932, 7, 34–64.—This paper concludes a study of grasping in infants ranging in age from 4 to 60 weeks. The infants were examined at four-week intervals, and their prehensory reactions were recorded by cinema. A description is given of the shifts in prehensile activities which accompany changes in age, and there is a discussion of the physiological and psychological forces which underlie these changes.—*H. Cason* (Wisconsin).

735. **Hochholzer, H. Lehrling und Schifttum.** (The apprentice and literature.) *Zsch. f. päd. Psychol.*, 1930, 31, 319–353.—The author gave a ques-

tionnaire dealing with reading habits to more than three hundred apprentices from 14 to 20 years of age, students in professional schools. More than 23% read very little, from lack either of interest or of time. More than a third devoted their leisure time to sports, this condition being particularly true for the older students. The reading curve reached its maximum for the age of 16, when nearly all the subjects were interested in reading. Then it descended in a regular form until it reached the age of 19, when only half of the subjects read regularly. Main interest was in works of imagination, particularly stories of adventure, as shown by one-fourth of the students at the age of 15. The percentage was less for the older ones, who were beginning to read the classics and novels. Travel books ranked second with no particular variation according to age. Technical books reached their maximum at the age of 17. Erotic and sexual stories were rare at 15, but nearly 40% of the 18-year-old students were interested in them. The greatest diversity of subject matter was found at the age of 17. Reasons for reading were grouped under the following heads: need of imaginary truths, a taste for action, ideas of practical advantage to be gained from reading, and a final group of poorly defined desires. The author, who was personally acquainted with the subjects tested, endeavored to group them according to Kretschmer's morphological types and characterized their reading as being typical of the pyknic, asthenic, and athletic forms.—*A. B. Hunter* (Clark).

736. **Mackintosh, H. K. A critical study of children's choices in poetry.** *Univ. Iowa Stud.: Stud. Educ.*, 1932, 7, No. 4. Pp. 128.—Four hundred poems were selected by the writer. Several groups of children in each of grades three, four, five and six heard and rated all of the poems, or samplings containing fifty of the poems. Groups of children were found to be consistent in average rating of fifty poems when reread. The same poems tended to rank in the same quartile in each grade. The comparatively low agreement between teachers' and experimenter's ratings and the children's ratings indicate "the possibility of some bias on the part of teachers and on the part of the experimenter. This condition seems to indicate the need for investigations in the field of children's choices in reading, since the same element of bias may be expected to operate in the case of any individual who attempts to select material for children."—*B. Wellman* (Iowa).

737. **Mead, M. An investigation of the thought of primitive children, with special reference to animism.** *J. Roy. Anthrop. Instit, Great Britain and Ireland*, 1932, 62, 173–190.—This is a report of a psychological field investigation carried out among children belonging to the Manus tribe of the Admiralty Islands. The methods used were: observation in ordinary social situations; collections of spontaneous drawings; interpretation of ink-blots; and reactions to questions designed to provoke animistic responses. The general conclusion is that "Manus children not only show no tendency towards spontaneous animistic thought, but they also show what may perhaps legitimately be termed a negativism towards explanations couched in animistic rather than in practical cause and effect terms." Where apparently animistic notions appeared, the author, always on the basis of carefully examined evidence, concludes that they were due mainly to the following of some well-established social habit or custom, and were not the result of spontaneous animistic thinking. Reasons for this result in the case of the subjects examined are discussed at some length.—*F. C. Bartlett* (Cambridge, England).

738. **Meltzer, H. Personification of ideals and stereotypes in problem children.** *Amer. J. Orthopsychiat.*, 1932, 2, 384–399.—The existence of stereotyped conceptions was studied in a group of 200 problem children by obtaining their answers to two questions: (1) "Who is the greatest man who ever lived? Why?" "Who is the greatest man living? Why?" The great concentration of names given in answer to these questions is taken as an indication of stereotypes. In answer to question (1), two names—Washington and Lincoln—get 64% of all mentions. These plus Jesus get 72%. Similarly, for question (2), the three leading names get 56% of all mentions. The clinical significance of these materials is revealed by comparing estimates made on the basis of these answers with other findings, psychological, psychiatric, physical and social.—*H. Peak* (Yale).

739. **Moldovan, M. Studiul individualităţii copilului pe baza observaţiei.** (The study of the individuality of the school child, based on observation.) *Rev. de psihol.*, 1931, 1, 23–35.—The author proposes a "copy-book of observations" for this study. This copy-book can be employed by anyone; it requires only willingness to make objective observations. It contains two columns, one for the phenomenological observations and the other for their interpretation from the scientific point of view, i.e., from the genotypic one. This interpretation is the work, first, of the teacher of psychology and pedagogy. The observations can be made by teachers, supervisors, parents, schoolfellows and by the subjects themselves from memory. This copy-book of observations will be used to complete the individual card of each school-boy which accompanies him in case of change of school or at the time of transfer from the elementary to the secondary school, and will also be employed for vocational guidance.—*M. Moldovan* (Bucarest).

740. **Newell, H. W. Family attitudes as revealed by the psychiatric examinations of 107 juvenile delinquents.** *Amer. J. Orthopsychiat.*, 1932, 2, 377–383.—Seven questions regarding attitudes toward members of the family were asked 107 delinquent children. Answers indicate that fathers punish more than mothers. Fathers favor daughters, and mothers sons. Jealousies are more strongly felt toward a sibling nearer in age to patient than toward one more remote in age. The absence of checks on validity and of a control group is remarked.—*H. Peak* (Yale).

741. **Piaget, J. Das Umdrehen des Gegenstandes beim Kind unter einem Jahr.** (The reversing of an

object with a child under one year.) *Psychol. Rundschau,* 1932, 4, 110–115.—The author experimented with a child at ages varying from seven months to nine months, to discover how he arrived at a sensing of a third dimension. The experiment was carried on with the child's bottle. Not until nine months and nine days was there definite indication that the child sensed the other end of the bottle when the bottom was presented to him instead of the nipple end.—*A. B. Herrig* (Michigan Central State Teachers College).

742. **Schmitz, B. Zur Psychologie von Kinderaussagen.** (The psychology of children's statements.) *Ärztl. sachv. Ztg.,* 1931, 37, 275–278.—The statements of children are subject to no greater sources of error than those of adults; they are simply different. The range of ideas of the child is different from the adult's. The child lacks conception of time, but has in general a good memory for persons and a good sense of place. Personal interest in an event determines in part whether observation is good or bad. "Good students" are not necessarily "good witnesses." Training in child psychology is essential for anyone attempting to understand a child's lies.—*C. W. Fox* (Rochester).

743. **Schneckenburger, H. Die Altersentwicklung und Milieubedingtheit des sozialethischen Verständnisses beim proletärischen Kinde.** (The development to maturity and the conditioning influence of the social-ethical comprehension of the child of the proletarian.) *Zsch. f. angew. Psychol.,* 1932, 42, 24–447.—An experimental study of the problem of fixation of ethical attitudes of children at various ages. Two groups of children, ages 6–14, were used for study, one from the *Volksschule,* the other for control purposes from a high school. Using three pictures depicting evil situations, he secures statements of the children's reactions. He classifies these attitudes, making a study of motives assigned for disapprovals expressed. The author recognizes that the child's attitudes toward life are egocentric and undifferentiated, determined by life-drives. Comments are made on the difficulty of separation of the endogenous and the exogenous factors as components of personality development.—*A. B. Herrig* (Michigan Central State Teachers College).

744. **Schuwerack, W. G. Wünsche der Industriejugend.** (The wishes of girls and boys in an industrial community.) *Zsch. f. päd. Psychol.,* 1930, 31, 451–458.—Schuwerack asked a group of primary and secondary school children (13 to 15 years of age), who were living in an industrial region, to list what they would like to do if they should suddenly become rich. He gives certain examples which tend to show that these young subjects possessed a well-developed practical understanding. The secondary children planned to carry out important business projects, and the primary pupils were interested in increasing their money and in assuring their parents a comfortable old age. Both groups desired to take long trips abroad.—*A. B. Hunter* (Clark).

745. **Thomson, H. Ueber nationale Unterschiede des Gefühlslebens Jugendlicher.** (Concerning national differences in the feeling life of youths.) *Zsch. f. angew. Psychol.,* 1932, 41, 257–365.—In the high schools of Estonia, German, Russian, and Estonian children in the two upper classes (10th and 11th school year) were compared. Each group of school children was being taught in their own mother tongue by teachers of their own nationality. The principal experiment consisted in showing the children a picture intended to elicit pity and asking for a written report of their feelings.—*M. F. Martin* (West Springfield, Mass.).

746. **Wittels, F. Set the children free.** (Trans. by E. and C. Paul.) London: Allen & Unwin, 1932. Pp. 242. 10/- net.—This book is mainly concerned with the satisfactory management of the relationships between parents and children. Its theoretical basis is to be found in Freud and Lévy-Bruhl, but its method is mainly that of first-hand observation. Numerous specific problems are frankly and fully discussed, among the rest those of punishment, the best ways of dealing with growing curiosity in the child, nursery management and subsequent careers, children's imagination, stepchildren, orphans, and the children of divorced parents. Some account is given of contemporary developments of education in Germany and Austria, and these are compared with the present position in England.—*F. C. Bartlett* (Cambridge, England).

747. **Yarmolenko, A. V. Obsledovanie dvisheniy normalnikh i anormalnikh detey.** (A study of the movements of normal and abnormal children.) Moscow: Gosudarstvennoe medizinskoe izdatelstvo, 1931. Pp. 123.—The purpose of the study was to establish norms for motor development at different age levels. Natural every-day motor activities were tested, such as walking, moving things from one place to another, lying down and getting up, throwing a ball, jumping, punching a bag, carrying weights, hopping on one foot, and holding the arms in an outstretched position. The tests were given to normal and abnormal children from 5 to 15 years of age, as well as to a group of adults. The activities were scored according to the speed, accuracy, strength, and perseverance involved, and the average scores were computed for each group of subjects. The results show that the greatest development in the motor sphere occurs during the preschool age, with a subsequent slowing down and even a temporary cessation during puberty. Feeble-minded children showed a lower level of motor ability, which could be slightly raised by systematic physical training.—*E. Hanfmann* (Worcester State Hospital).

[See also abstracts 482, 610, 676, 680, 695, 696, 754.]

EDUCATIONAL PSYCHOLOGY

748. **[Anon.] Was ist Heilpädagogik?** (What is remedial pedagogy?) *Psychol. Rundschau,* 1932, 4, 127.—Through efforts in Switzerland by Amann, Guggenbuhl and Pestalozzi, interest has been aroused in remedial pedagogy. Today 12,000 children are cared for in institutions, but 50,000 more have not

had their needs met. The author emphasizes the need of investigation as opposed to belief in help coming from religion and life philosophies.—*A. B. Herrig* (Michigan Central State Teachers College).

749. **Clucas, C. S. The problem of dates in the teaching of history and in measurement.** *J. Educ. Res.*, 1932, 26, 90–96.—Analysis of 5 texts in American history and 5 in European history at the high-school level shows that the date loads run from 685 to 1356 mentions of from 182 to 253 dates. An analysis was also made of the date load in certain standard achievement tests. From these data a list of 26 dates in American history are suggested as the most important.—*S. W. Fernberger* (Pennsylvania).

750. **Crabtree, E. K. A study of the effect of a course in children's literature upon students' own literary appreciation experimentally determined in a normal school.** Baltimore: Johns Hopkins Univ. Press, 1932. Pp. 34. $.33.—Controlled (equivalent-group) experimentation on 32 pairs of normal college students, with a view to investigating growth in certain measurable aspects of literary appreciation, yielded the following major findings: students' own literary appreciation is increased by an intensive course on children's literature; general ability, knowledge of sentence structure and grammar, reading comprehension, and chronological age have little to do with students' appreciation of literature; and many students of ages 16 to 19 prefer "sentimental" poetry.—*O. L. Harvey* (Boston).

751. **Dodge, H. L. [Ed.] Abstracts of theses for higher degrees in the Graduate School of the University of Oklahoma, 1931.** *Univ. Okla. Bull.*, 1932 (Misc. No.). Pp. 76.—*M. O. Wilson* (Oklahoma).

752. **Gottschalk, R. Um die Ganzheitsmethode im ersten Lesenunterricht.** (Regarding the "whole method" of teaching beginning reading.) *Dtsch. Schule*, 1932, 36, 336–337.—A brief discussion of the new method of teaching reading. The writer calls attention to its prevalence in America and England and its use by Decroly in Brussels; Germany is experimenting with it in over 200 schools, substituting it for the synthetic method of approach, so long in use. He refuses to give Arthur Kern credit for originality in his efforts to bring this method to the attention of educators.—*A. B. Herrig* (Michigan Central State Teachers College).

753. **Guiler, W. S. Remediation of college freshmen in sentence structure.** *J. Educ. Res.*, 1932, 26, 110–115.—Results of work at Miami University, where 350 freshmen were given the Guiler-Henry Preliminary Diagnostic Test in Sentence Structure, are analyzed. The results indicated that college freshmen differed greatly in their ability to apply the principles of sentence structure. the range being from perfect to zero scores. On the basis of these results a remedial program was organized for 162 men. Complete data were obtained from 135 of these students. A final test indicated that there was marked improvement in these cases.—*S. W. Fernberger* (Pennsylvania).

754. **Hild, H. Sprachheilpädagogischer Fragebogen zur Zählung sprachgehemmter Kinder.** (A pedagogical list of queries on speech training, for the enumeration of handicapped children.) Camberg, Nassau: Author, 1930. Pp. 4. 20 copies, RM. 1.—Especial attention is due to the enumeration of speech handicapped children for the office of the director of schools. For this reason all supervisory departments should undertake with him the carrying out of an enumeration, so that eventually some conception may be arrived at as to how large a number of children in all types of schools are subject to the various types of speech defect.—*K. Meister* (Camberg).

755. **Jones, E. S. The grade-test correlation as an index of motivation.** *School & Soc.*, 1932, 36, 478–480.—The author maintains that the higher is the correlation between university grades and intelligence-test scores in the case of an institution, the greater is the scholastic motivation of the students. He presents the following evidence in support of his hypothesis. The aforesaid correlation has increased at the University of Buffalo presumably with (1) the discouragement of individuals who did poor work in high school from entering the college, (2) the institution of special study classes for the inferior students who did enter, (3) the raising of standards in many courses, (4) the analysis of and attempt to correct the failures of good students, and (5) the establishment of an honors system for those of superior accomplishments. It was also noted that the grade-test correlation varied from college to college in the University, and this in a fashion which paralleled the amount of outside work in which those registered in the colleges indulged on the average. Much outside employment was presumably related to low motivation.—*H. L. Koch* (Chicago).

756. **Lehman, H. C., & Witty, P. A. Vocational counseling: the interest inventory.** *Amer. J. Psychol.*, 1932, 44, 801–805.—The authors analyze the concept of "interests" as an aid in helping young people to decide upon a vocation. They emphasize the fact that interests are acquired, not innate, and that to use them as the basis of predicting success in a particular field of endeavor is misleading. They criticize the use of Hepner's Vocational Interest Quotient (V.I.Q.).—*D. E. Johannsen* (Skidmore).

757. **Lueck, W. R. The arithmetical and algebraic disabilities of students pursuing first year college physics.** *Univ. Iowa Stud.: Stud. Educ.*, 1932, 8, No. 1. Pp. 48.—The immediate purpose of this study was to present an organized report of arithmetical and algebraic disabilities found in students of first year college physics. The more fundamental purpose was "to aid in increasing control over learning in first year physics classes by creating a factual basis upon which preventive and remedial measures may be founded." 282 students of first year college physics in five Iowa colleges were studied. The Compass Survey Test and the Douglass Diagnostic test were given. These were supplemented by other tests given by the teachers and by a detailed test especially constructed embodying the mathematical skills re-

quired in physics problem solving. Considerable mathematical disability was found. Pupils in the eighth grade and first year of high school exceeded the college group studied in arithmetic and algebra. The educational implication of these findings is discussed.—*B. Wellman* (Iowa).

758. **Meil, W. Das Klassenherz.** (The class spirit.) *Dtsch. Schule*, 1932, 36, 325–336.—A suggestion is made for the development of a desirable class spirit. The desirability of a class spirit as dominating all efforts of instruction is held up. The author holds that a fine class motive may be used to guide and to interpret all experiences and become the background for character development. He illustrates his point with many instances of judgments made of situations arising, and shows how such a class spirit can be used even in specific subjects.—*A. B. Herrig* (Michigan Central State Teachers College).

759. **Nash, J. B. [Ed.] Mind-body relationships.** New York: Barnes, 1931. Pp. 276. $2.00.—This is the first volume of a series on the interpretations of physical education. It is edited by the chairman of the department of physical education, New York University. It contains 17 chapters written by specialists in their fields. These chapters consider life as a bio-physical mechanism and health as an integration of the living organism.—*R. Stone* (State Hospital, Marlboro, N. J.).

760. **Nash, J. B. [Ed.] Nature and scope of examinations.** New York: Barnes, 1931. Pp. 307. $2.00.—This volume contains 30 chapters written by specialists in their fields on personality, glands, metabolism, neurology, common skin diseases, pediatrics, laboratory tests and other tests and examinations that the teacher should find helpful.—*R. Stone* (State Hospital, Marlboro, N. J.).

761. **Odell, C. W. Educational measurement in the secondary school.** *J. Educ. Res.*, 1932, 26, 81–89.—From a review of the development of achievement tests for secondary schools during the last 20 years, the author believes that several major problems need attack, such as better prognosis for high school and college success. He suggests a critical study of the tests already existing rather than the development of new measures.—*S. W. Fernberger* (Pennsylvania).

762. **Owings, C. Some current practices in sex education.** Minneapolis: Univ. Minnesota Press, 1932. Pp. 25. $0.50.—A survey of the content of courses at the University of Minnesota, conducted by interviews with 100 (15%) staff members, shows that of 2395 courses offered 101 contain some material on sex education. Of these 89 make no classroom application to life situations involving the mating urge. 2 make incidental application or reference to such situations; in 4 application is vague or impersonal, and in 6 (.25%) there is practical and effective application. "No established credit courses under permanent instructors responsible for the entire course, no course or combination of courses gave adequate subject materials in sex education together with an effective application to life situations and relationships involving the mating urge." A possible program, designed to meet local requirements at Minnesota, is outlined.—*M. P. Montgomery* (Faribault, Minn.).

763. **Perry, F. V., & Broom, M. E. A study of standard tests and of teacher-made objective tests in foods.** *J. Educ. Res.*, 1932, 26, 102–104.—Results are presented from 116 girls, students in two high schools at San Diego, California, who were given 4 unstandardized and 3 standardized tests on foods and food preparation. A statistical treatment of the results indicates greater validity for two of the unstandardized tests than for the best of the standardized ones, with the other two standardized tests showing the lowest validity.—*S. W. Fernberger* (Pennsylvania).

764. **Peterson, E. T., Lindquist, E. F., Jeep, H. A., & Price, M. P. Teacher supply and demand in Iowa.** *Univ. Iowa Stud.: Stud. Educ.*, 1932, 7, No. 2. Pp. 464.—Factual evidence concerning the supply and demand of the teaching personnel in Iowa for one year, 1928–29, is set forth in this volume. The study includes rural, city elementary, junior high school, and senior high school teachers, principals and assistant principals and school superintendents.—*B. Wellman* (Iowa).

765. **Strang, R. Vocational paths to certain educational positions.** *School & Soc.*, 1932, 36, 508–512.—The vocational histories of 546 individuals holding one of nine types of educational positions were analyzed. Many routes apparently lead to each type. The first position tends to be held for a shorter time than later ones. High school teaching seems the most frequent approach to positions of the following kinds: deanships, principalships in high school, college teaching, advisory work, and to Y. W. C. A., social, religious, and health work. Positions in elementary schools are usually among the first held, but from these individuals do advance to all types of educational responsibilities.—*H. L. Koch* (Chicago).

766. **Traxler, A. E. The correlation between reading rate and comprehension.** *J. Educ. Res.*, 1932, 26, 97–102.—Results from 80 seventh-grade pupils at the University of Chicago High School on five forms of a rate reading test form the basis of the study. A statistical treatment of the results indicates a very low correlation between rate of reading and comprehension. The slow readers seem to have understood the test material about as well as did the rapid readers.—*S. W. Fernberger* (Pennsylvania).

767. **Valentine, C. W. The reliability of examinations.** London: Univ. London Press, 1932. Pp. 195. 7/6 net.—The results of data collected throughout several years on the subsequent educational careers of scholarship students in relatively elementary and in the most advanced centers of education in England are here set forth. It appears that scholarship awards, made on the basis of the usual type of examination performance, have little prognostic reliability save at the universities of Oxford and Cam-

bridge. Both of these old established universities come tolerably well out of the test, with Cambridge in a slightly superior position as regards men students. But at secondary schools and at the other universities of England the award of scholarships is a very unsafe guide to subsequent educational success. Full data are given, and reasons for the relative failure of the present examination system are advanced. Constructive proposals are made. The place of "tests" in relation to examinations receives consideration.—*F. C. Bartlett* (Cambridge, England).

[See also abstracts 474, 574, 673, 695, 696, 701, 725.]

BIOMETRY AND STATISTICS

768. **Brolyer, C. R. A formula for a mean tetrad.** *J. Gen. Psychol.*, 1932, 6, 212–214.—*H. Cason* (Wisconsin).

769. **Constantine, J. F. Methods of calculating ages, including a newly devised slide rule.** *J. Educ. Res.*, 1932, 26, 132–135.—Description of the form and method of use of a new slide rule for computing ages accurately and exactly in terms of the number of years, months and days.—*S. W. Fernberger* (Pennsylvania).

770. **Horst, P. The chance element in the multiple choice test item.** *J. Gen. Psychol.*, 1932, 6, 209–211.—A mathematical treatment of the chance factor and the requirements of the test.—*H. Cason* (Wisconsin).

MENTAL TESTS

771. **Beck, L. F. Relation of speed of reaction to intelligence.** *Amer. J. Psychol.*, 1932, 44, 793–795.—The object of this study was to throw light upon the importance of speed as a factor in intelligence by determining the correlation between speed in simple reaction, serial reaction, reading, and the scores in an intelligence test. 30 university students served as subjects. The *r*'s between the three measures of speed and the intelligence test scores (Thorndike College Entrance Examination, reliability .85) were: .02, .25, and .32, respectively. The author finds that the differences, in excess of chance, for these measures are 88.8%, 86.9%, and 85.1% respectively. The conclusion is reached that speed in these functions is not a measure of intelligence.—*D. E. Johannsen* (Skidmore).

772. **Fränkel, F., & Benjamin, D. Der Rorschachsche Formdeutversuch als differentialdiagnostisches Mittel für Gutachter.** (The Rorschach form-interpretation experiment as a means of differential diagnosis for examiners.) *Ärztl. sachv. Ztg.*, 1932, 38, 20–23.—The Rorschach test is useful in forensic examination and elsewhere because it gives information concerning the intellectual capacities of the individual, and particularly because it can be used to distinguish genuine dements from dissemblers. Evaluation of the results requires experience.—*C. W. Fox* (Rochester).

773. **Freeman, F. S. The factor of speed.** *J. Gen. Psychol.*, 1932, 6, 462–468.—The Ohio State University Psychological Test was given to 117 students both with and without the usual time limits. In many time-limit tests the real levels of a small, though important, number of individuals are obscured.—*H. Cason* (Wisconsin).

774. **Morison, A. G. Speech and intelligence.** *Lancet*, 1932, 222, 931–932.—Constructors of intelligence tests have recognized the vocabulary test to be of high value in the estimation of intelligence. The degree of intelligence is also indicated by the age at which speech begins, articulation, persistence of "lalling," and the presence of echolalia. The author has never observed echolalia except in the mentally defective.—*D. J. Ingle* (Minnesota).

775. **Nass, G. Gestaltauffassung und Nachbildung. Berufspsychologische Untersuchungen zur Methodik der Feststellung gestaltbildener Fähigkeiten.** (Form comprehension and copying. Vocational psychology investigations on the method for determining form-building abilities.) *Zsch. f. angew. Psychol.*, 1932, 41, 425–472.—In the experiments here reported, the author worked out a new method for testing form comprehension and analyzing errors. Apparatus consisted of a board containing about 100 wooden pegs, around which a string was to be twisted. Forms could be drawn by putting the string in various positions around different pegs. The subjects were first instructed to copy forms for which a complete model was given. Then they were given a part of a design and asked to complete the design around axes of symmetry. The apparatus and sample problems and solutions are illustrated. There was surprising uniformity in the kind of errors made. The author draws many important theoretical conclusions. Figures to be copied cannot be grasped as wholes but must be analyzed into parts. Awareness of the correctness of one part-form facilitates the comprehension of the other parts and of the whole figure.—*M. F. Martin* (West Springfield, Mass.).

776. **Wilcocks, R. W. On the distribution and growth of intelligence.** *J. Gen. Psychol.*, 1932, 6, 233–275.—The South African Group Test of Intelligence is described, with which a research was carried out leading to determinations of curves of the distribution and growth of intelligence. The results are based on the test performances of 16,574 school children of European descent in the Union of South Africa who were 120 to 192 months old. The scaling of the test totals is described, by means of which it was possible to construct a standard scale of totals, successive totals differing by equal steps of difficulty. Using this scale, the distribution of intelligence, as measured by the test, was found to be almost perfectly normal. It is also shown that the growth of intelligence, with increase of chronological age from 120 to 192 months, can be expressed in terms of a hyperbolic equation. The standard deviations of the distributions in terms of standard scores are found to increase slightly with increase of chronological age for the ages mentioned above.—*H. Cason* (Wisconsin).

[See also abstracts 464, 608, 611, 722, 770.]

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